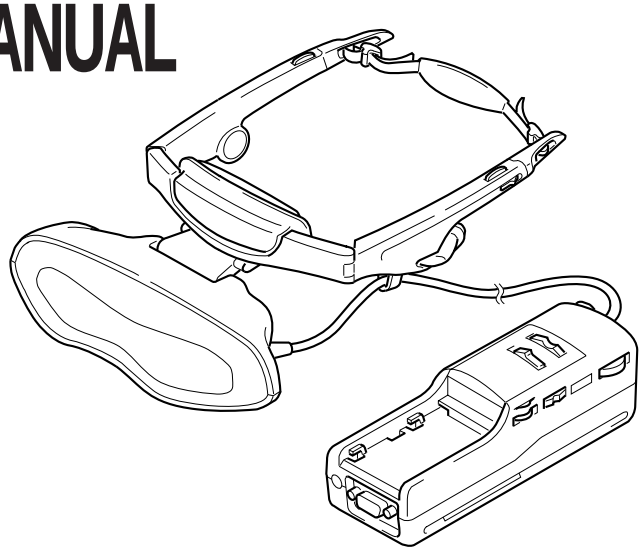
PLM-S700E

SERVICE MANUAL

AEP Model



SPECIFICATIONS

Power supply
AC power adapter: AC-PLM3
100-240 V AC, 50/60 Hz, 18.5 W
Output voltage 8.4 V, 1.6 A
Battery pack: NP-F550/NP-F750/
NP-F950 (not supplied)

Power consumption
10 W (approx., PC mode)
12 W (approx., VIDEO mode)

Operating temperature
41°F to 95°F (5°C to 35°C)

Storage temperature
14°F to 140°F (–10°C to 60°C)

Dimensions
Display unit:
Approx. $5\ ^{7}/_{8} \times 1\ ^{15}/_{16} \times 3\ ^{1}/_{2}$ inches
(Approx. 149 × 48 × 86 mm)
(w/h/d folded)
Power supply box:
Approx. $2\ ^{1}/_{4} \times 1\ ^{7}/_{8} \times 6\ ^{3}/_{8}$ inches
(Approx. 54 × 47 × 160 mm)
(w/h/d)
not including projecting parts and controls

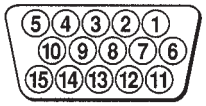
Mass
Display unit: Approx. 5.3 oz (120 g)
Power supply box: Approx. 2.7 oz (260 g)

Video signal
PAL colour, CCIR standards

Input

PC mode
RGB signal: HD15

Pin Assignment



Pin No.	Signal
1	R (Red)
2	G (Green)
3	B (Blue)
4	–
5	GND
6	R (Red) GND
7	G (Green) GND
8	B (Blue) GND
9	–
10	GND
11	GND
12	–
13	SYNC (Horizontal)
14	SYNC (Vertical)
15	–

PC AUDIO input: Stereo minijack

– Continued on next page –

GLASSTRON

SONY®

9-928-115-31

VIDEO mode

AUDIO/VIDEO input: Special minijack
Video: 1 Vp-p, 75 ohms, unbalanced, sync negative
S VIDEO input: 4-pin mini DIN
Y: 1 Vp-p, 75 ohms, unbalanced, sync negative
C: 0.286 Vp-p, 75 ohms, unbalanced, sync negative

Screen resolution

Horizontal: 832 dots (max.)
Vertical: 624 lines (max.)

Supplied accessories

AC power adapter AC-PLM3 (1)
Mains lead (1)
RGB signal cable (1)
Audio/video cable (special miniplug ⟷ phono plug) (1)
S-video cable (1)
Audio/video cable (special miniplug ⟷ special miniplug) (1)
Audio cable (stereo miniplug) (1)
Adapter for Macintosh (1)
Carrying cases (2)
Sunshades (1 pair)
Operating Instructions (1)
Windows 95/Windows 98 PC Glasstron Information Disk (1)
Screen adjustment disk for Macintosh (1)
Warranty (1)

Design and specifications are subject to change without notice.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual (3-862-932-□□).

Glasstron is a brand-new concept in visual display

Congratulations on your purchase of a Sony Glasstron Personal Viewer. The Glasstron, using current technology in small, lightweight visual displays, provides a television viewing experience similar to watching a 30-inch television from a distance of approximately 4 feet in SVGA mode. (Viewing experience may differ according to individual perception.)

Note on the LCD (Liquid Crystal Display)
The LCD screen is made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is not malfunction. (Effective dots: more than 99.999%)

The Glasstron Personal Viewer creates an image through two separate liquid crystal displays, in close proximity to your eyes. To insure your safe use of the Glasstron, please become familiar with its basic operations, including proper fitting instructions, and be aware of any symptoms of eye fatigue or other discomfort you may experience.

WARNING
YOUR FAILURE TO FOLLOW THESE OPERATING INSTRUCTIONS MAY RESULT IN EYE FATIGUE, EYE IMPAIRMENT, OR OTHER EYE INJURY, PROPERTY DAMAGE OR DEATH.

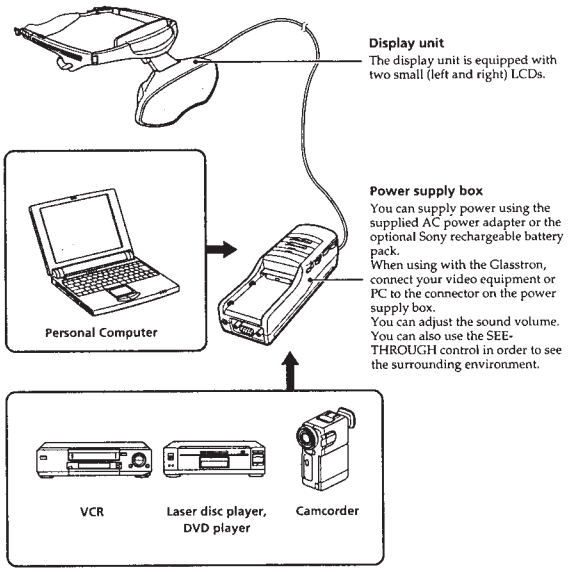
WARNING
THIS PRODUCT SHOULD NOT BE USED BY CHILDREN AGE 15 OR YOUNGER. THE EYES OF CHILDREN ARE STILL DEVELOPING AND MAY BE ADVERSELY AFFECTED FROM USE OF THIS PRODUCT.

About the Glasstron

Caution: The screen is always right in front of you.
The Glasstron is a head-mounted display. With this type of display, the screen is always in front of you even if you move your head. Because of this feature, you can concentrate on the screen more easily compared with ordinary TVs, and you have a sense of being in the action.

- It is easy to adjust the Glasstron to your eyes. You can use the display unit even while wearing glasses.
- Every time you use the Glasstron, the adjustment screen appears to help you adjust the display unit properly. You can also check whether the left and right screen positions are properly aligned or not.
- Cautions appear on the screen about every two hours to remind you to check for eye fatigue. The power will automatically turn off if you do not press the PUSH DISPLAY jog dial. If you keep using the Glasstron continuously for six hours, a warning appears on the screen and the power will turn off automatically.

The Glasstron consists of the following items:


Display unit
The display unit is equipped with two small (left and right) LCDs.
Power supply box
You can supply power using the supplied AC power adapter or the optional Sony rechargeable battery pack.
When using with the Glasstron, connect your video equipment or PC to the connector on the power supply box.
You can adjust the sound volume.
You can also use the SEE-THROUGH control in order to see the surrounding environment.
Personal Computer
VCR
Laser disc player, DVD player
Camcorder

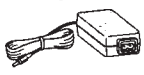
Checking the supplied accessories

Check that the following accessories are supplied with your Glasstron. If any item is not supplied, contact your Sony dealer or local authorised Sony service facility.

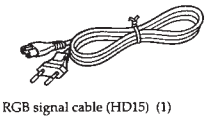
- Display unit/power supply box (1)

- Sunshades (1 pair)

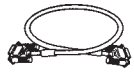
- AC power adapter AC-PLM3 (1)



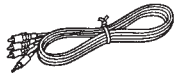
- Mains lead (1)



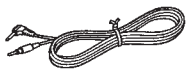
- RGB signal cable (HD15) (1)



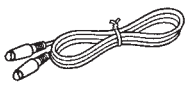
- Audio/video cable (special miniplug ⟷ phono plug) (1)



- Audio/video cable (special miniplug ⟷ special miniplug) (1)



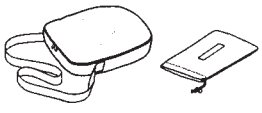
- S-video cable (1)



- Audio cable (stereo miniplug) (1)

- Macintosh adapter (1)

- Carrying cases (2)

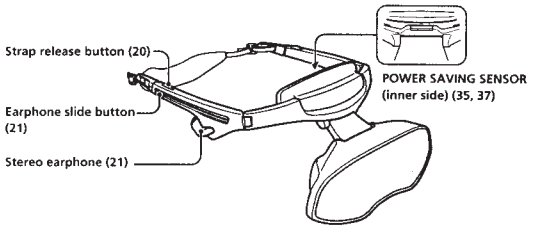


- Windows 95/Windows 98 PC Glasstron Information Disk (1)
- Screen adjustment disk for Macintosh (1)
- Operating instructions (1)
- Warranty (1)

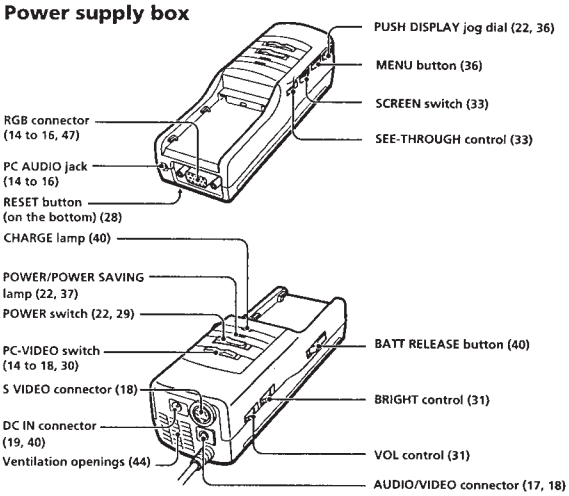
Locating the parts and controls

Refer to the pages indicated in parentheses ( ) for details.

Display unit



Power supply box


PUSH DISPLAY jog dial (22, 36)
MENU button (36)
SCREEN switch (33)
SEE-THROUGH control (33)
RGB connector (14 to 16, 47)
PC AUDIO jack (14 to 16)
RESET button (on the bottom) (28)
CHARGE lamp (40)
POWER/POWER SAVING lamp (22, 37)
POWER switch (22, 29)
PC-VIDEO switch (14 to 18, 30)
S VIDEO connector (18)
DC IN connector (19, 40)
Ventilation openings (44)
BATT RELEASE button (40)
BRIGHT control (31)
VOL control (31)
AUDIO/VIDEO connector (17, 18)

Connecting the Glasstron

Connecting the PC

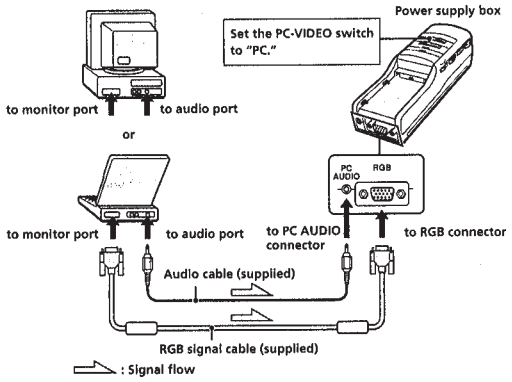
Be sure to turn off your PC before connecting the power supply box.

Notes

- Refer to the instruction manual supplied with your PC as well.
- Depending on your computer, the audio port is indicated as LINE OUT, headphone, speaker, etc.
- Adjust sound volume on the computer.

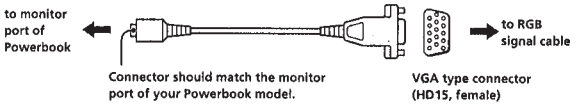
Connecting other IBM compatible PCs

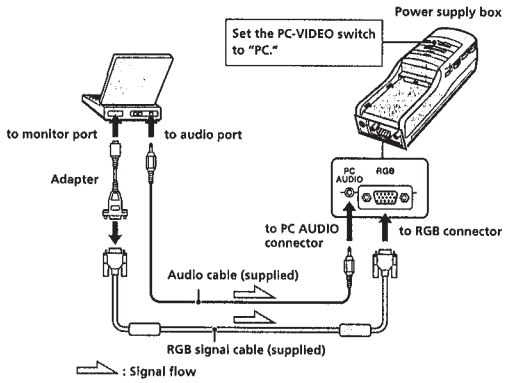
Connect the Glasstron to your PC using the supplied RGB signal (HD15) cable. When you connect the Glasstron to your PC, set the PC-VIDEO switch on the power supply box to "PC."



Connecting a Macintosh Powerbook

Depending on the model, you may need to use a commercially available adapter to connect the RGB signal cable (supplied) as shown below. When you connect the Glasstron to your Powerbook, set the PC-VIDEO switch on the power supply box to "PC."


to monitor port of Powerbook
to RGB signal cable
Connector should match the monitor port of your Powerbook model.
VGA type connector (HD15, female)



Note on connection

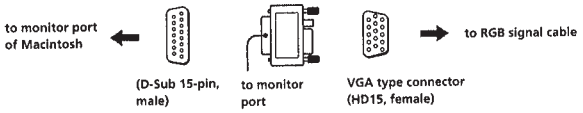
Set the display setting to the 16-inch display mode (832 × 624) or the 13-inch display mode (640 × 480). The Glasstron does not display the image with the 19-inch display mode (1024 × 768) or more.

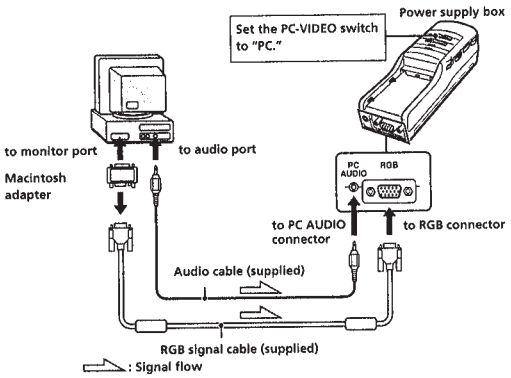
continued

Connecting the Glasstron (continued)

Connecting a Macintosh (desktop models)

Depending on the model, you may need to use the supplied Macintosh adapter to connect the RGB signal cable (supplied) as shown below. When you connect the Glasstron to your Macintosh, set the PC-VIDEO switch on the power supply box to "PC."



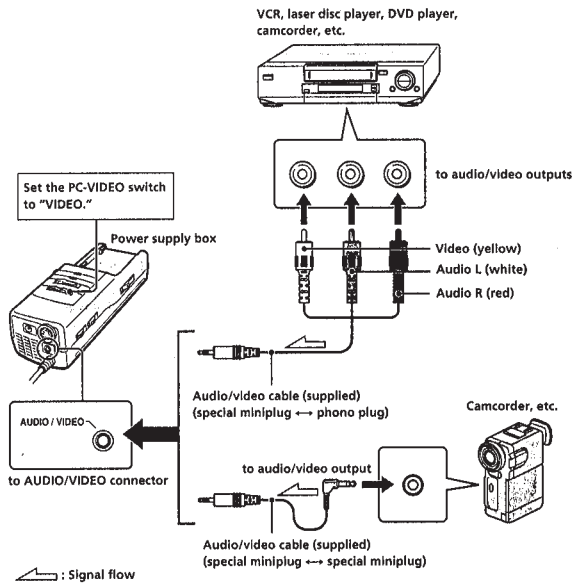


Notes on connection

- The supplied display adapter does not support the models before the Macintosh II series.
- Set the display setting to the 16-inch display mode (832 × 624) or the 13-inch display mode (640 × 480). The Glasstron does not display the image with the 19-inch display mode (1024 × 768) or more.

Connecting the video equipment

Connect a VCR, laser disc player, DVD player, or camcorder to the power supply box using one of the audio/video cables (supplied) as shown below. When you connect the Glasstron to the video equipment, set the PC-VIDEO switch on the power supply box to "VIDEO."

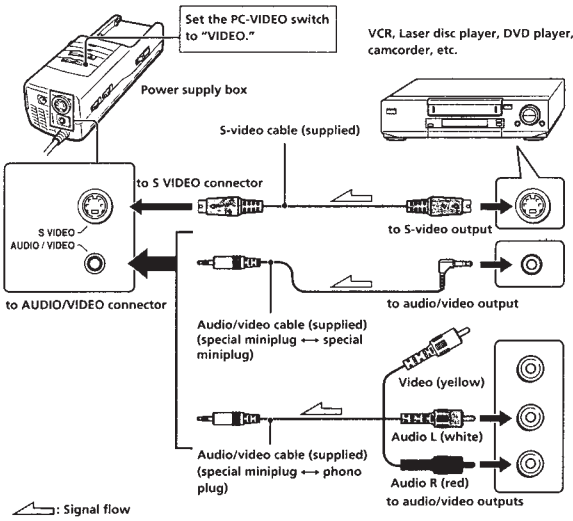

VCR, laser disc player, DVD player, camcorder, etc.
to audio/video outputs
Set the PC-VIDEO switch to "VIDEO."
Power supply box
Video (yellow)
Audio L (white)
Audio R (red)
Audio/video cable (supplied) (special miniplug ⟷ phono plug)
Camcorder, etc.
AUDIO / VIDEO
to AUDIO/VIDEO connector
to audio/video output
Audio/video cable (supplied) (special miniplug ⟷ special miniplug)
: Signal flow

continued

Connecting the Glasstron (continued)

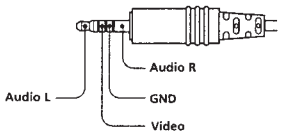
If your video equipment has an S-video jack

Connect the Glasstron to the video equipment using the supplied S-video cable and the audio/video cable to enjoy the highest quality pictures. In this case, you do not need to connect the video (yellow) plug. If you connect both the S-video and video plugs, the S-video signal is automatically selected. When you connect the Glasstron to the video equipment, set the PC-VIDEO switch on the power supply box to "VIDEO."


Set the PC-VIDEO switch to "VIDEO."
VCR, Laser disc player, DVD player, camcorder, etc.
Power supply box
S-video cable (supplied)
to S VIDEO connector
S VIDEO
AUDIO / VIDEO
to S-video output
to AUDIO/VIDEO connector
to audio/video output
Audio/video cable (supplied) (special miniplug ⟷ special miniplug)
Video (yellow)
Audio L (white)
Audio/video cable (supplied) (special miniplug ⟷ phono plug)
Audio R (red)
to audio/video outputs
: Signal flow

About the AUDIO/VIDEO input jack

The AUDIO/VIDEO input jack of the Glasstron is a special minijack, and the signal connections are aligned as shown on the right. This alignment may differ depending on the equipment.

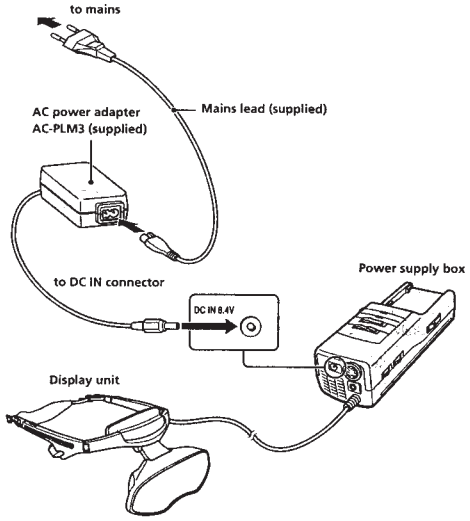


Notes

- Even if you use the supplied audio/video cable, the audio and video signals may not be carried to the Glasstron depending on the video source. In this case, contact your Sony dealer or local authorised Sony service facility.
- When you connect the Glasstron to the audio output jacks (phono jacks) of your video equipment, connect the Glasstron to both the right and left audio output jacks. If you connect the Glasstron to just one audio output jack, you will hear sound from only one of the stereo earphones.

Connecting the power source

Connect the AC power adapter AC-PLM3 (supplied) to the DC IN connector on the power supply box. Then, connect the Mains lead (supplied) to the AC power adapter and to a mains. Do not connect the power source until all other connections are complete.



Wearing the Glasstron

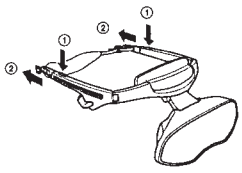
WARNING

- Failure to properly fit the product (see "Proper Fit," page 8) each time may result in eye fatigue, eye damage, or loss of visual functions and may result in accident or injury.
- This product should not be used by children age 15 or younger.
  The eyes of children are still developing and may be adversely affected by use of this product, and it may cause eye fatigue, eye damage, or loss of visual functions.
  In addition, this product may not be adjusted to fit a child's head.

If you normally wear glasses while watching TV, you can use the Glasstron while wearing glasses.

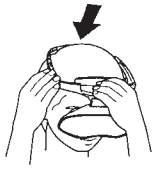
1 Loosen the back strap.

① Press and hold the strap release buttons.
② Then, loosen the back strap in the direction of the arrows.



2 Put on the Glasstron.

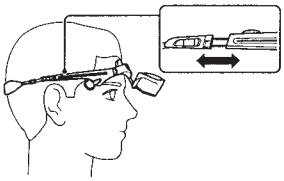
Hold the front pad against your forehead and place the rear strap so it is fixed firmly around the back of your head.



3 Adjust the strap.

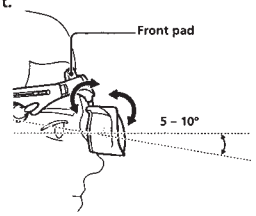
Adjust the strap after putting on the Glasstron.

Make sure the strap is snug but comfortable.



4 Adjust the angle of the display unit.

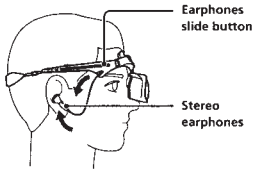
While holding the front pad against your forehead, adjust the angle of the display unit using the two hinges. Move the display unit close to your eyes at a slight downward angle. If you wear glasses, move the display unit as close to the lenses as possible.



5 Adjust the stereo earphones.

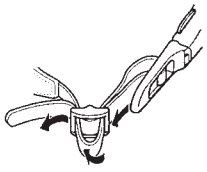
Pull the earphones out.

To adjust the slack, reel in the earphone cord by pressing the slide button in the direction of the arrow.



Adjusting the back strap

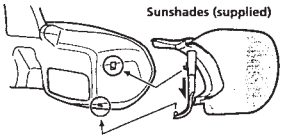
If the strap does not fit properly in step 3, adjust the strap by changing the belt length.



Attaching the sunshades

You can attach the supplied sunshades if you like. The sunshades prevent the LCD screen from reflecting light that may interfere with the picture.

Attach the sunshades on the right and left sides of the display unit. Pull out the tab of the sun shade, then insert the tabs into the holes on the display unit as shown below.



Turning on the Glasstron

After you complete all of the connections and put on the Glasstron properly, turn on both the Glasstron and the connected equipment, and follow the procedures below.

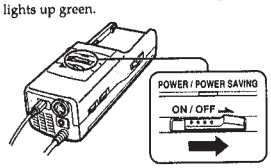
① Checking the display unit position → This page
② Checking the screen position alignment → Pages 24
③ Setting a password → Page 27
If you do not want to use a password, you have to set the Glasstron to operate without using a password in "Setting the password."

Checking the display unit position

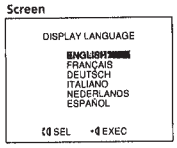
Every time you turn on the Glasstron, the adjustment screen appears to help you adjust the display unit properly. Adjust the display unit following the procedure below.

1 **Turn on the Glasstron sliding the POWER switch.**

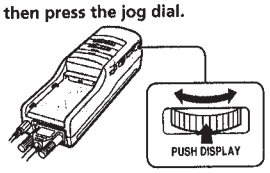
The POWER/POWER SAVING lamp lights up green.



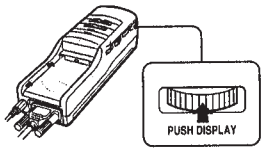
Screen



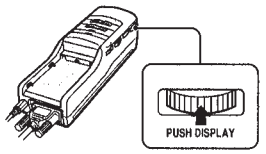
2 **Turn the PUSH DISPLAY jog dial to select the desired language, then press the jog dial.**

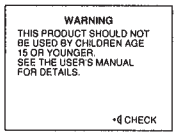


3 **Read the WARNING and press the jog dial.**

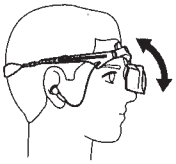


4 **Read the next WARNING and press the jog dial.**

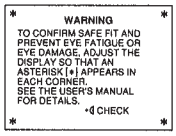




5 **Adjust the display unit so that you can see an asterisk (*) in each of the four corners as shown below.**



Correct


WARNING
TO CONFIRM SAFE FIT AND PREVENT EYE FATIGUE OR EYE DAMAGE, ADJUST THE DISPLAY SO THAT AN ASTERISK (*) APPEARS IN EACH CORNER.
SEE THE USER'S MANUAL FOR DETAILS.
CHECK

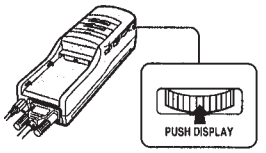
Incorrect

Incorrect

Incorrect

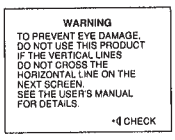
Incorrect

6 **After you complete the display unit adjustment, press the jog dial.**



continued

7 **Read the next WARNING, then go to "Checking the screen position alignment."**

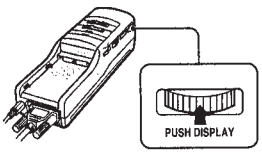

WARNING
TO PREVENT EYE DAMAGE, DO NOT USE THIS PRODUCT IF THE VERTICAL LINES DO NOT CROSS THE HORIZONTAL LINE ON THE NEXT SCREEN.
SEE THE USER'S MANUAL FOR DETAILS.
CHECK

Checking the screen position alignment

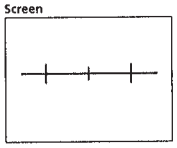
WARNING
Each time this product is used, adjustment screens will appear, requiring the viewer to properly fit the product. Proper fit means that an asterisk (*) will appear in each corner of the display. To prevent eye damage, do not use this product if the vertical lines do not cross the horizontal line on the next screen.

The Glasstron includes two small (left and right) LCDs. You are watching a combined picture created from these two screens. Although the screen position is properly aligned at the factory, it may become misaligned if the Glasstron is deformed or damaged. Check the screen position alignment every time you turn on the Glasstron. If you cannot have correct screen alignment, stop using the Glasstron immediately.

1 **Press the PUSH DISPLAY jog dial.**



Screen



2 **If the screens are aligned, press the jog dial.**

Left screen

Right screen

You may see a horizontal line on the left screen rather than the right screen, and vertical lines on the right screen rather than the left screen. This is not a malfunction.

Correct

The combined picture you see with both eyes

If the image you see matches one of the pictures below, you have correct screen alignment.

Correct

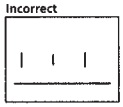
Correct

Correct

Correct

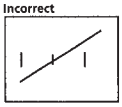
If the image you see matches one of the pictures below, stop using the Glasstron immediately. Use of the Glasstron under such conditions may cause eye fatigue or eye damage.

Incorrect



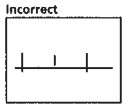
When no vertical lines cross the horizontal line.

Incorrect



When the horizontal line appears as a diagonal line.

Incorrect

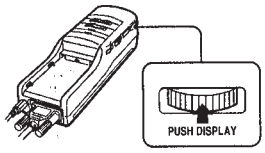


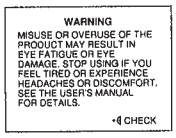
When the centre vertical line does not cross the horizontal line.

If you cannot see a proper arrangement of these lines even after resting your eyes for a few hours, the Glasstron may not be operating correctly. Contact your Sony dealer or local authorised Sony service facility.

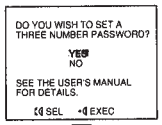
continued

3 Read the WARNING and press the jog dial.




WARNING
MISUSE OR OVERUSE OF THE PRODUCT MAY RESULT IN EYE FATIGUE OR EYE DAMAGE. STOP USING IF YOU FEEL TIRED OR EXPERIENCE HEADACHES OR DISCOMFORT. SEE THE USER'S MANUAL FOR DETAILS.
CHECK

The password "YES or NO" screen appears.



Go to "Setting the password" on page 27.

Setting the password

WARNING
This product should not be used by children age 15 or younger. The eyes of children are still developing and may be adversely affected by use of this product. To prevent such use, this product has been equipped with a safety password protection system. Please use a secure password if children age 15 or younger may have access to this product.

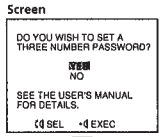
Once you set a password, you have to input the password every time you use the Glasstron. Do not forget your password. If you like, you can set the Glasstron to operate without a password.

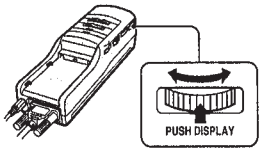
Before you start...
Follow the procedure in "Turning on the Glasstron" (pages 22 through 26). The password "YES or NO" screen appears on the screen.

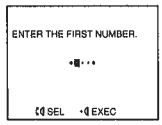
1 Select whether to set a password or not using the PUSH DISPLAY jog dial.

If you need to set a password, select YES. If not, select NO by turning the jog dial. Then press the jog dial. If you do not need to set a password, go to step 4 in "Using the Glasstron" (page 29).

Screen

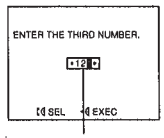




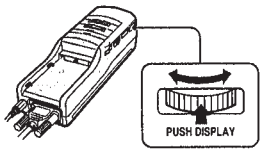


2 Enter a three digit password number, one by one, by using the jog dial.

Turn the jog dial to enter the first number, then press the jog dial. Enter the second and third numbers in the same way.



Entered password

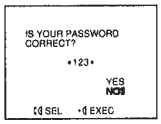


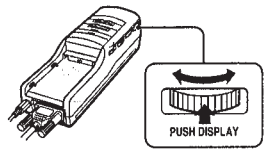
continued

3 Verify a password using the jog dial.

If the password is correct, select YES by turning the jog dial. If not, select NO. Then press the jog dial.

If you select NO, return to step 1.
If you select YES, go to step 4 in "Using the Glasstron" (page 30).



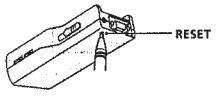


Changing the password

When the power is on, press RESET on the bottom of the power supply box with a pointed object such as a ballpoint pen.

- If you have already read the WARNING messages (page 22 through 26) (e.g., while watching a video picture), the display will return to step 1 in "Setting the password" (page 27).
- Before you read the WARNING message (e.g., you have forgotten your password), the display will return to step 3 in "Turning on the Glasstron" (page 22).

If you need to set a password after having set the Glasstron to operate without a password, follow the same procedure above.



Note
Pressing the RESET button does not affect picture or sound adjustments in PC and video mode.

Using the Glasstron

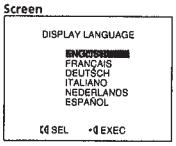
You need to set a password the first time you use the Glasstron or after you reset the Glasstron. Set the password following the procedure in "Setting the password" (pages 27 and 28).

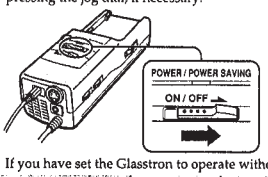
Before you start...
Be sure to follow the procedures in "Connecting the Glasstron" (pages 14 to 19) and "Wearing the Glasstron" (page 20).

1 Turn on the Glasstron using the POWER switch, then press PUSH DISPLAY jog dial.

Change the display language before pressing the jog dial, if necessary.

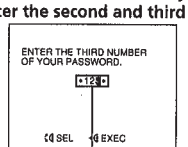
Screen



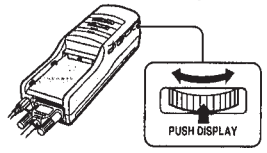


If you have set the Glasstron to operate without a password, go to step 3.

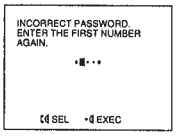
2 Turn the PUSH DISPLAY jog dial to enter the first number of your password, then press the jog dial. Enter the second and third numbers in the same way.



Entered password



If you enter a wrong password, the message shown on the right appears. Enter the correct password.



If you have entered a wrong password more than five times, after about ten seconds, the Glasstron turns off automatically.

continued

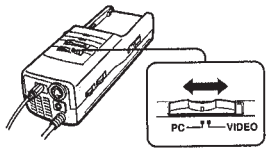
3 Follow the instructions on the screen.

① Warning message → Follow steps 3 through 7 in "Checking the display unit position" (pages 22 through 24).
- After carefully reading the warnings and checking the display unit position, press the jog dial.

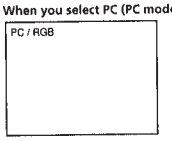
② Screen alignment → Follow steps 1 through 3 in "Checking the screen position alignment" (pages 24 through 26).
- Read the warning carefully, and press the jog dial.
- Make sure the left and right screens are aligned, and press the jog dial.

4 Select the input signal using the PC-VIDEO switch.

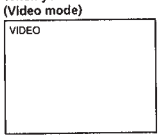
Select PC (RGB signal) or VIDEO (video signal) depending on the connected equipment.



When you select PC (PC mode)



When you select VIDEO (Video mode)



When you connect to the S-video connector

"S VIDEO" appears on the screen.

5 Input the signal from the connected equipment.

When you connect the PC:

Adjust the screen resolution. For details, see "Signal compatibility" on page 34.

When you display VGA pictures (640 × 480), the picture appears about 60% of the entire screen.

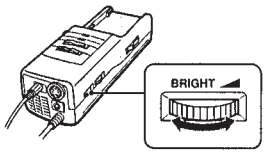
Notes
- If no picture appears, check the default setting of your PC to output the external RGB signal from the monitor connector.
- Some PCs do not output external display signal when they turn on, or switch to external display mode. Change the display mode of your PC, referring to the instruction manual supplied with your PC.

When you connect the video equipment:

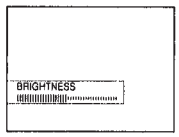
Start playback on the video equipment connected to the Glasstron.

When you display PAL video picture, the picture appears about 84% of the entire screen.

6 Adjust the brightness by turning the BRIGHT control.

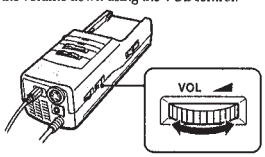


darker ⟷ brighter



7 Adjust the sound volume by turning the VOL control.

When you set AVLS in the menu to on, you cannot turn up the volume beyond the defined limit (see page 37). If the audio input level is too high, the sound may be distorted. Turn the volume down using the VOL control.



lower ⟷ louder

After you finish using the Glasstron

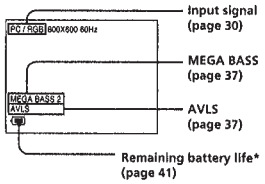
Take off the Glasstron, and turn off the power.

Note on the LCDs

The LCD screen is made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is not malfunction. (Effective dots: more than 99.999%)

Checking the display indication

Press the jog dial while the picture is displayed. The display indication appears on the screen for five seconds.
To turn off the indication sooner, press the jog dial again.



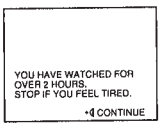
* When using the AC power adapter, the "🔌" mark appears on the screen.

continued

Screen warnings against overuse of the Glasstron

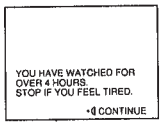
To prevent eye fatigue or eye damage, after you use the Glasstron for a fixed length of time, the following caution appears on the screen.

After about 2 hours and 15 minutes of use



Stop using the Glasstron if you feel tired or you experience headaches or discomfort.
If you want to continue using the Glasstron, press the jog dial.

After about 4 hours and 15 minutes of use

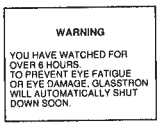


Stop using the Glasstron if you feel tired or you experience headaches or discomfort.
If you want to continue using the Glasstron, press the jog dial.

Note

If you do not press the jog dial when the cautions above appear on the screen, the Glasstron turns off automatically in both cases.

After about 6 hours of use


WARNING
YOU HAVE WATCHED FOR OVER 6 HOURS.
TO PREVENT EYE FATIGUE OR EYE DAMAGE, GLASSTRON WILL AUTOMATICALLY SHUT DOWN SOON.

The power turns off automatically.

Caution: Motion sickness from viewing programmes.

Some viewers may experience motion sickness, headache, or nausea from viewing movies or video programmes, especially those with intense action and movement. If you feel any of these symptoms, stop using the product immediately. To avoid personal injury or injury to others, do not drive a car or motorcycle, nor do anything that requires concentration until the symptoms disappear.

Caution: Motion sickness from external motion.

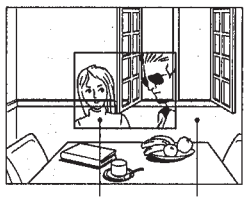
Do not use the product while subject to external motion — for example, as a passenger in a car. Use of this product under these conditions may cause motion sickness.

Viewing the surrounding environment

While you are wearing the Glasstron, you can view the surrounding environment through the screen in two ways:

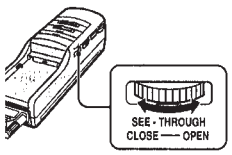
Viewing the surrounding environment by adjusting the transparency of the entire screen (See-through mode)

You can adjust the level of transparency of the entire screen with the LCD shutter dial.



The picture becomes transparent. The area surrounding the picture also becomes transparent.

Turn the SEE-THROUGH dial.

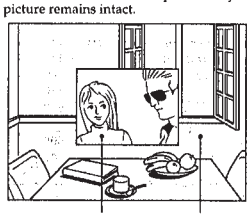


Note

If there is a bright light near the display unit, you may not be able to completely black out the surrounding environment by adjusting the SEE-THROUGH dial.

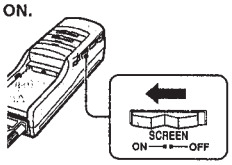
Viewing the surrounding environment in the area around the picture only (Screen mode)

You can adjust the level of transparency of the screen area around the picture only. The picture remains intact.



The picture remains intact. The area surrounding the picture also becomes transparent.

Set the SCREEN switch to ON.



In this mode, the screen does not become transparent even if you turn the SEE-THROUGH dial.

Notes
- When you set the SCREEN switch to ON, the edges of the picture may fade a bit, but this is not a malfunction.
- If there is a bright light near the display unit, you may not be able to completely black out the surrounding environment arround the picture by adjusting the SEE-THROUGH dial when you set the SCREEN switch to on.

Adjusting the sound and picture

Signal compatibility

The signal specifications that this unit supports are as follows:

PC mode (RGB signal)

Display mode	Screen resolution (dot × line)	Horizontal frequency (kHz)	Vertical frequency (Hz)
Macintosh			
13" colour	640 × 480	35.0	67
16" colour	832 × 624	49.7	75
IBM PC compatibles			
VGA text	640 × 400	31.5	70
VGA graphics	640 × 480	31.5	60
VESA VGA	640 × 480	37.9	72
	640 × 480	37.5	75
	640 × 480	43.3	85
VESA SVGA	800 × 600	35.2	56
	800 × 600	37.9	60
	800 × 600	48.1	72
	800 × 600	46.9	75
	800 × 600	53.7	85

Video mode (video signal)

PAL colour system	Displayed in 762 × 572 area

Notes on the PC mode

- This unit does not support XGA mode (1,024 × 768) and above. If you set the vertical frequency to 60 Hz in XGA mode, the picture is displayed but the picture quality is poor due to the signal loss. Change the screen resolution on your PC to SVGA or VGA.
- Though the Glasstron supports the signals listed above, set the vertical frequency to 60 Hz when using with SVGA (800 × 600), or to 72 Hz or 75 Hz with VGA (640 × 480) mode. Also adjust the vertical frequency of the external display output signal of the connected computer.
- When you display VGA pictures (640 × 480) or PAL video pictures (video mode), the pictures are not displayed across the entire screen. About 60% area of the screen is utilised when VGA pictures appear, or about 84% area is utilised when PAL video pictures appear.
- Some notebook type PCs do not output the RGB signal in the adjusted screen resolution and the vertical frequency from the external monitor port until you set the PC to external display mode.
- When you use Microsoft Windows 95 or Windows 98, install the information file included in the supplied Windows 95/Windows 98 PC Glasstron Information Disk. For details on how to install the information file, refer to the instruction manual "Windows 95/Windows 98 PC Glasstron Information Disk/screen adjustment disk for Macintosh".

Adjusting the sound/picture

You can adjust the following items using the menu display.
The menu is displayed only in English.

PC mode (RGB signal)	Video mode (video signal)
AVLS (Auto Volume Limiter System): Keeps the maximum volume down to protect your ear. You cannot turn up the volume beyond the defined limit even if you try to turn the VOL control.	
MEGA BASS: Creates a deep, powerful sound by emphasizing the bass sound.	
POWER SAVE: The POWER SAVING SENSOR detects the removal of the Glasstron from your head. The unit enters standby mode in a few seconds, automatically stopping the sound and picture in order to save the battery power. The sound and picture resume in a few seconds when you put on the Glasstron again.	
V CENT: Adjusts the vertical position of the picture.	**CONTRAST:** Adjusts the picture contrast.
H CENT: Adjusts the horizontal position of the picture.	**COLOUR:** Adjusts the colour intensity.
TRACKING: Adjusts the tracking of the picture (e.g., if the picture is not displayed clearly).	
SYNC: Adjusts the picture with the RGB signal synchronization (e.g., if the picture is blurred, or if red or blue shadows appear in the picture). Perform this adjustment after TRACKING adjustment is finished.	

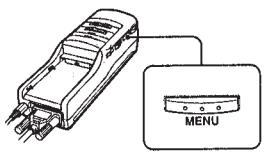
Operations

continued

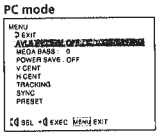
Adjusting the sound and picture (continued)

1 Press MENU.

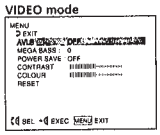
The menu display appears on the screen.



PC mode

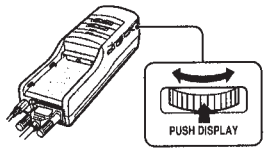


VIDEO mode



2 Turn the PUSH DISPLAY jog dial to select the desired item, then press the jog dial.

The setting screen of the selected item appears.



3 Adjust the setting using the jog dial.

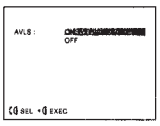
For details on each item, see pages 37 to 39.
To set other items, repeat steps 2 and 3.

4 Press MENU.

The menu display goes off.
You can also turn off the menu display by selecting EXIT in the menu using the jog dial.

AVLS (Auto Volume Limiter System)

Turn the jog dial to set to ON, then press the jog dial.

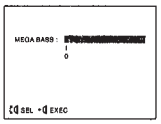


When AVLS is on, the volume does not become louder than the level you set even if you turn the VOL control.

MEGA BASS

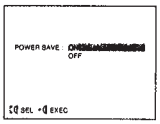
Turn the jog dial to select the desired value, then press the jog dial.

2: Maximise the bass sound.
1: Boost the bass sound.
0: Normal bass sound.



POWER SAVE

Turn the jog dial to set to ON, then press the jog dial.



When you take off the display unit while the POWER SAVE is set to ON, the POWER SAVING SENSOR (page 13) is activated and automatically turns off the picture and sound. The picture and sound resumes a few seconds after putting the display unit back on.

When POWER SAVE is set to ON, you can monitor the status of the Glasstron by checking the POWER/POWER SAVING indicator.

Status	POWER/POWER SAVING indicator	Picture	Power consumption
Normal	Lit in green	Normal	100%
Power save mode	Lit in orange	No picture	5%

Note

The power saving function of the Glasstron does not work together with the power management function of your PC.

Operations

continued

Adjusting the RGB signal

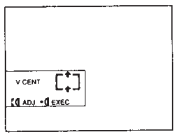
It is recommended to adjust the picture after installing the information file included in the supplied Windows 95/Windows 98 PC Glasstron Information disk, or the screen adjustment disk for Macintosh. For details on how to install the information file, refer to the instruction manual "Windows 95/Windows 98 PC Glasstron Information Disk/screen adjustment disk for Macintosh".

Note

When you display the picture on both the LCD display of the notebook PC and on the Glasstron, you cannot adjust the picture on the Glasstron because of the mismatch of the output signal frequencies with some notebook PCs. In this case, change the display mode on your PC to the external monitor only. Then, change the screen resolution according to the list on "Signal compatibility" (page 34).

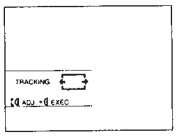
V CENT

Turn the jog dial to adjust the centre of the picture, then press the jog dial.



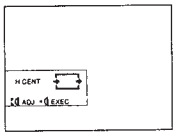
TRACKING

Turn the jog dial until the stripes on the picture disappear, then press the jog dial.



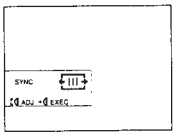
H CENT

Turn the jog dial to adjust the centre of the picture, then press the jog dial.



SYNC

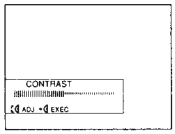
Turn the jog dial to adjust the clearance of the picture, then press the jog dial.



Adjusting the video signal

CONTRAST

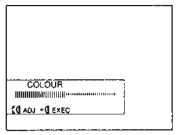
Turn the jog dial to adjust the contrast, then press the jog dial.



less ⟷ more

COLOUR

Turn the jog dial to adjust the colour intensity, then press the jog dial.



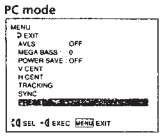
less ⟷ more

Resetting the adjustment to the factory preset level

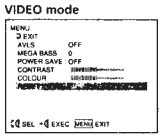
AVLS, MEGA BASS, POWER SAVE settings are not reset to the factory preset level.

Turn the jog dial to select RESET in the menu, then press the jog dial.

PC mode



VIDEO mode



Note

The settings are retained even when you turn off the power.

continued

Using the optional battery pack

If you use a battery pack such as the NP-F550/F750/F950, you can use the Glasstron without connecting to a mains.

Note

You cannot use the Glasstron with the alkaline batteries. Use the AC power adapter (supplied) or the battery pack (not supplied)

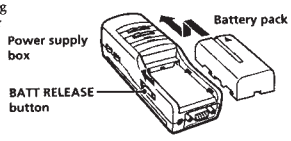
Charging the battery pack

Charge the battery pack before use. You can charge the battery pack using the power supply box. If you attach the battery pack as described below, the battery pack charges while you are not using the Glasstron.

1 Attach the battery pack to the power supply box.

Install the battery pack properly making sure it is not crooked against the power supply box.

To remove the battery pack, while sliding BATT RELEASE, pull out the battery pack.

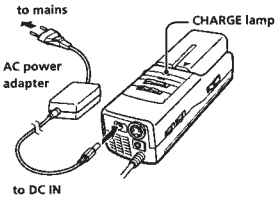


2 Connect the AC power adapter to the DC IN connector on the power supply box. Then, connect the mains lead to the AC power adapter and to a mains.

Charge the battery pack on a flat place without vibration.

The CHARGE lamp lights up. When the battery pack is fully charged, the CHARGE lamp goes out.

Battery life and charging time are shown in the table on the next page.



Notes

- If the POWER/POWER SAVING lamp flashes while using the battery pack, charge the battery pack.
- If the CHARGE lamp flashes, the power supply box or battery pack is malfunctioning. Contact your Sony dealer or local authorised Sony service facility.
- Use the supplied AC power adapter only when charging a battery pack.
- Battery life may be shorter in a cold environment. This is a typical battery characteristic.
- You cannot charge the battery pack in power save mode. Turn off the Glasstron, then it starts charging the battery pack.

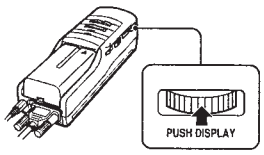
Battery pack	Charging time	Battery life (fully charged battery, PC mode)
NP-F550	Approx. 4 hours	Approx. 1 hour
NP-F750	Approx. 8 hours	Approx. 2 hours
NP-F950	Approx. 12 hours	Approx. 3 hours

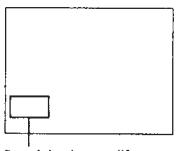
- The battery life and charging time may change depending on the conditions of use.
- You can also use a battery pack such as the NP-F530/F730/F930 (not supplied) with the Glasstron.
- You can use an InfoLITHIUM™ battery pack with the Glasstron. When using such a battery pack, the estimated remaining battery life is displayed not with the time counter, but with the indicator.
- The battery life listed above is for PC mode. When you use the Glasstron in video mode, the battery life is reduced to 80% of the PC mode.

"InfoLITHIUM" is a trademark of Sony Corporation.

Checking the remaining battery life

When no indication or caution appears on the screen, press the jog dial.





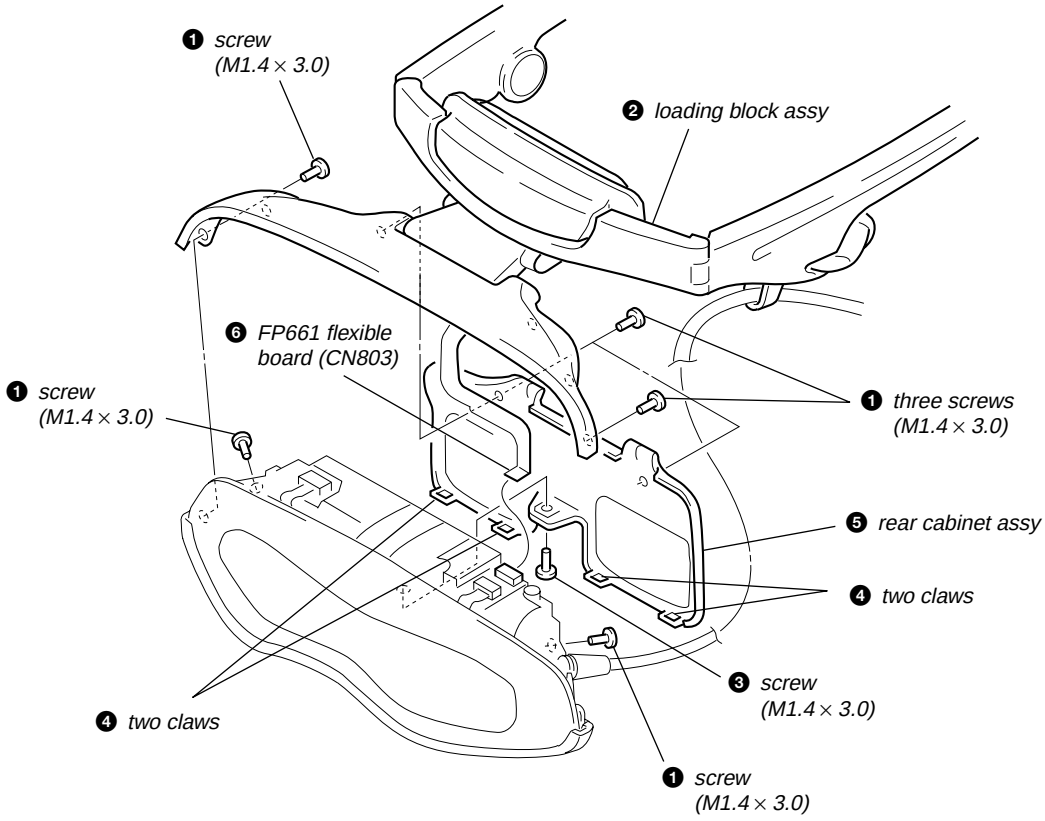
When the battery pack is weak, the following message appears on the screen. Replace the battery pack with a charged one.

When using the AC power adapter, the "🔌" mark appears on the screen.

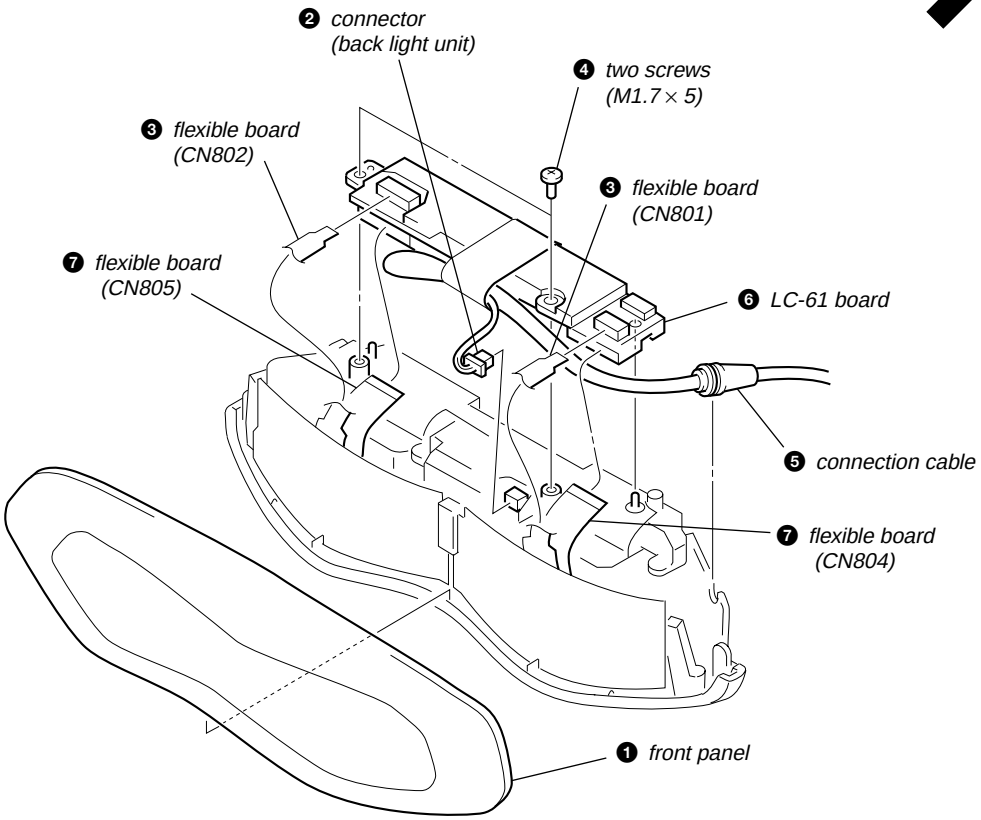
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

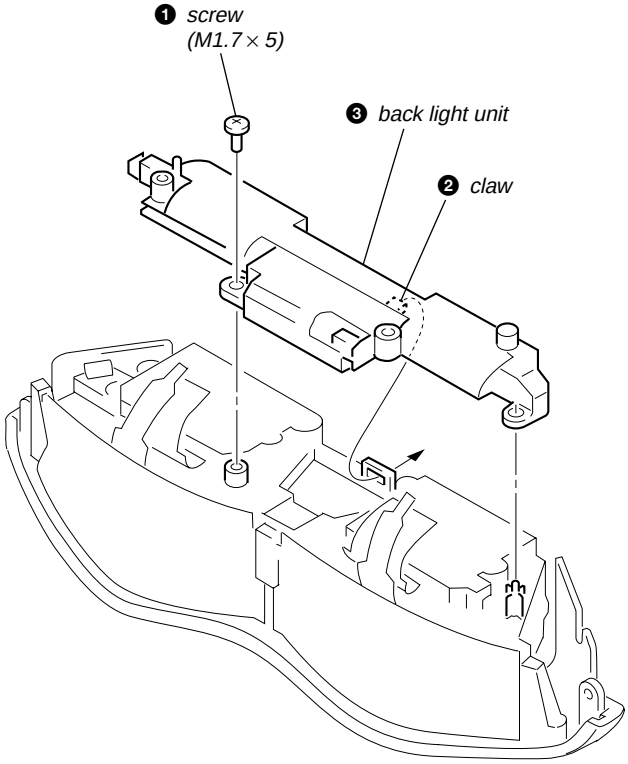
LOADING BLOCK ASSY


❶ screw (M1.4 × 3.0)
❷ loading block assy
❻ FP661 flexible board (CN803)
❶ screw (M1.4 × 3.0)
❶ three screws (M1.4 × 3.0)
❺ rear cabinet assy
❹ two claws
❸ screw (M1.4 × 3.0)
❹ two claws
❶ screw (M1.4 × 3.0)

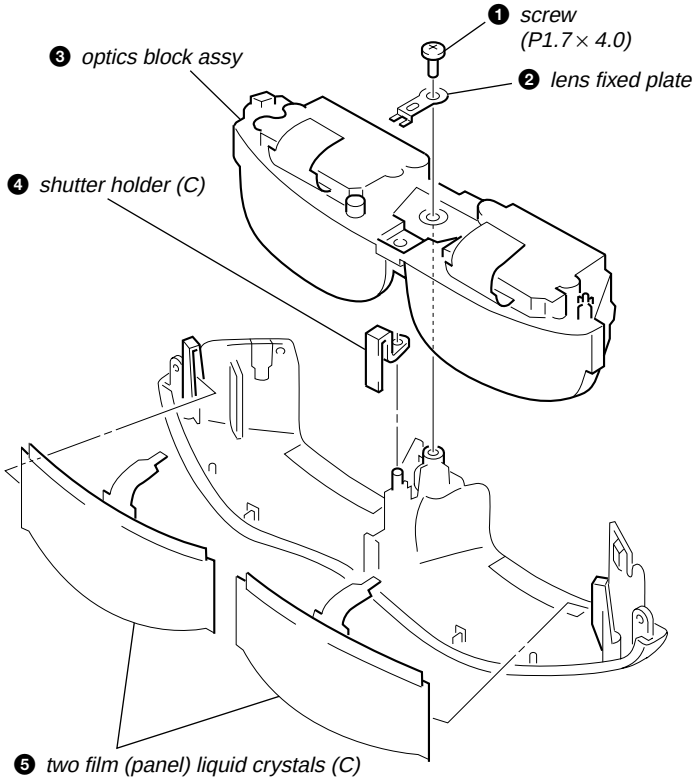
LC-61 BOARD


❷ connector (back light unit)
❹ two screws (M1.7 × 5)
❸ flexible board (CN802)
❸ flexible board (CN801)
❼ flexible board (CN805)
❻ LC-61 board
❺ connection cable
❼ flexible board (CN804)
❶ front panel

BACK LIGHT UNIT



OPTICS BLOCK ASSY, FILM (PANEL) LIQUID CRYSTAL



SECTION 3
ELECTRICAL ADJUSTMENTS

Precautions on adjustment:

1. Perform the adjustment in the given order.
2. Power supply voltage: DC 8.4 V
3. Equipment required
   Electrical adjustment requires the following measuring equipment.

(1) Oscilloscope: 2 phenomena, band 30 MHz or more, with delay mode (use 10 : 1 probe unless otherwise specified)
(2) Pattern generator
(3) Regulated power supply × 2
(4) Digital voltmeter
(5) Frequency counter
(6) Connector for adjustment

4. Measurement points for adjustment are located at CN1003 on the YC-148 board and at CN206 on the MA-324 board. The pin No. and signal name of CN1003 and CN206 are listed below.

• YC-148 Board, CN1003

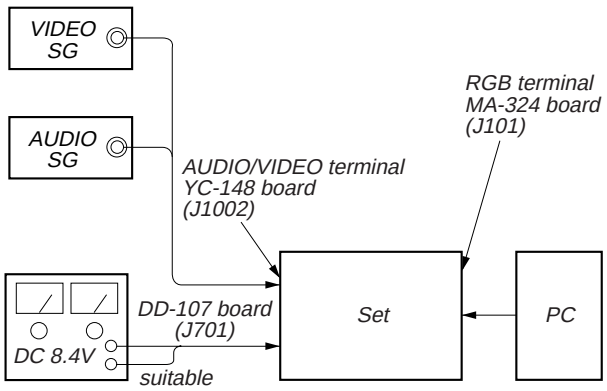
Pin No.	Signal Name	Pin No.	Signal Name
1	GND	6	GND
2	GND	7	Y OUT
3	GND	8	VIDEO G
4	4FSC	9	N.C
5	GND	10	GND

• MA-324 Board, CN206

Pin No.	Signal Name	Pin No.	Signal Name
1	SIG R 1	9	GND
2	A	10	GND
3	SIG G 1	11	B
4	POWER SW	12	COM R
5	SIG B 1	13	C
6	ENTER	14	COM L
7	INT H	15	SIG CEN
8	VIDEO/XPC IN	16	P SIG B

Preparation:

Connect electrical blocks as shown below.



5. Setting up Input Signals

(1) Video Signal

In adjusting this set, video signals obtained from the pattern generator are used, and therefore these video output signals must satisfy the specification. Connect the oscilloscope to the VIDEO IN terminal, and confirm that the sync signal amplitude of video signals is approximately 0.3 V, the amplitude of video part is approximately 0.7 V, burst signal amplitude is approximately 0.3 V and flat, and the level ratio of burst signal to "red" signal is 0.30 : 0.66.

Where "chroma signal, and color bar signal with burst signal turned off" is specified in the text, enter chroma signal and color bar signal of which burst signal is turned off to the VIDEO IN terminal as video input signals for adjustment.

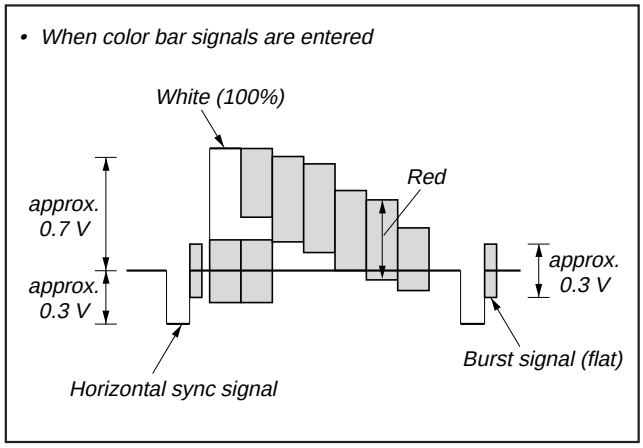


Fig. 3-1. Pattern generator's color bar signals

(2) PC Signal (RGB signal)

Signal mode	H (kHz)	V (Hz)	HDISP (dots)	VDISP (dots)
PC98	24.82	56.41	640	400
VGA-TEXT	31.47	70.08	640	362
VGA-GRAP	31.47	59.94	640	480
VGA72	37.86	72.82	640	480
VGA75	37.50	74.99	640	480
MAC13'	35.00	66.67	640	480
VGA85	43.27	85.01	640	480
SVGA56	35.16	56.26	800	600
SVGA60	37.88	60.32	800	600
SVGA72	48.08	72.19	800	600
SVGA75	46.88	75.01	800	600
SVGA85	53.68	85.07	800	600
MAC16'	49.73	74.55	832	624
XGA60	48.36	59.99	1024	768

[Preparation for Adjustment]

1. Service Jigs

(1) Adjusting remote commander (RM-95-modified)

Note 1: J-6082-053-B

(2) Extension cable (for remote commander plug converter) J-6082-291-A

Note 1: The page will not be changed over, unless the microprocessor in the adjusting remote commander is a new one (UPD7503-G-C56-12). In such a case, replace with new microprocessor (8-759-148-35).

2. Adjusting Remote Commander

For the adjustment, the adjustment data saved in the nonvolatile memory (EEPROM) must be rewritten, and for this purpose the adjusting remote commander is used.

The adjusting remote commander makes two-way communication with the product using a remote control signal line (LANC). The adjusting remote commander transmits pages, addresses, and data up/down commands to the product. The product transmits pages, addresses, and data to the adjusting remote commander.

3. How to Use Adjusting Remote Commander

(1) Connect the adjusting remote commander to the CN501 on MA-324 board via extension cable (J-6082-291A).

(At this time, set the switch of extension cable to OFF (OPEN) position.)

Set the PC or VIDEO mode and turn ON the power on the set.

(2) Set the HOLD switch on the adjusting remote commander to the HOLD (SERVICE) position.

If connection is normal, the LCD display on the adjusting remote commander will be as shown in Fig.3-2.

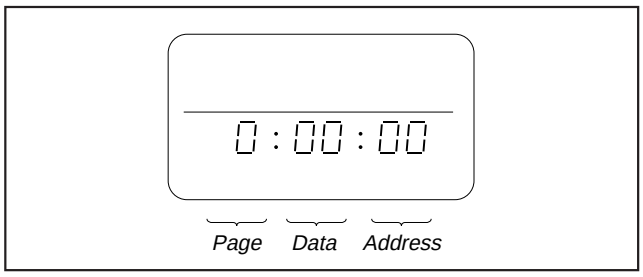


Fig. 3-2

(3) Operate the adjusting remote commander as follows:

- Page change
  Press the EDIT SEARCH + button to increase the page.
  Press the EDIT SEARCH – button to decrease the page.
  There are 16 pages from 0 to F.

Hexadecimal numbers	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
LCD display	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal conversion	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

- Address change
  Press the FF (►►) button to increase the address.
  Press the REW (◄◄) button to decrease the address.
  There are 256 addresses from 00 to FF.
- Data change (data setting)
  Press the PLAY (►) button to increase the data.
  Press the STOP (■) button to decrease the data.
  There are 256 data from 00 to FF.
- Adjustment data writing
  The PAUSE button must be pressed to write adjustment data (E or F pages) to the nonvolatile memory (EEPROM). (Unless the PAUSE is pressed, new data are not saved in the nonvolatile memory.)

(4) Select page: 0, address: FF, and set 01 data. Thus, the data input to page: E or F is enabled.

(5) After the adjustment finished, select page: 0, address: FF, and set 00 data. Thus, the data change on page E or F is disabled.

(6) After all adjustments finished, turn OFF the main power supply (8.4 V) once.

4. Precaution on Use of Adjusting Remote Commander

Misoperation of the adjusting remote commander could erase correct data. To prevent this, it is recommended to make a note of data from page E or F before adjustment, and also to make a note of new adjustment data each time the adjustment of one item is finished.

Adjusting Remote Commander RM-95 (J-6082-053-B)

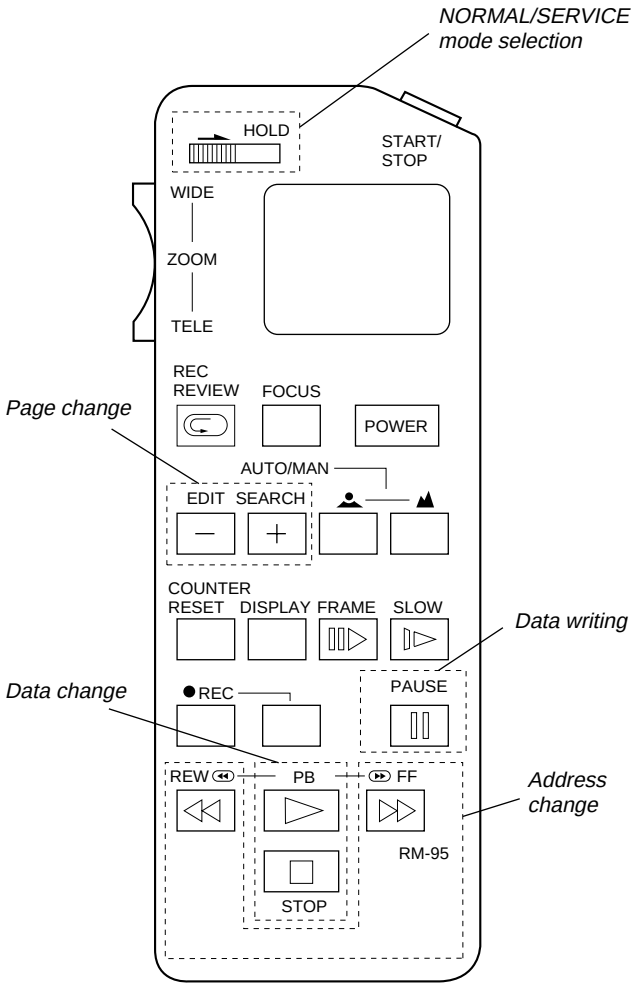


Fig. 3-3

5. Data Processing

Certain adjustment items require the microprocessor data to be read out or the displayed data (hexadecimal numbers) on jigs or adjusting remote commander to be calculated to get adjustment data. In such a case, convert hexadecimal numbers into decimal numbers once, then make calculation, and convert its result into hexadecimal number as adjustment data. Table 1 shows hexadecimal – decimal number conversion.

Hexadecimal – Decimal number conversion.

Lower digit of hex. / Higher digit of hex.	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	D (d) ②	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
① → B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Table 1.

Note: Data in ( ) are displayed on jig or adjusting remote commander.

Example: If display on jig or adjusting remote commander is BD (bd)

As higher digit of hex. number is B (b) and lower digit is D (d), the intersection "189" of ① and ② in Table 1 is the target decimal number.

6. Power ON Procedure for Adjustment
(1) Connect an extension cable to the adjusting remote commander.
(2) Set the PC or VIDEO mode on the set.
(3) After making sure that the HOLD switch on the adjusting remote commander is not turned on (not at left (NOR) position), supply 8.4 Vdc to the DC IN (J701).
(With the HOLD switch at HOLD position, the initial operation of the set does not finish, disabling the POWER switch function.)
(4) Turn ON the POWER switch on the set. Confirm that a green LED lights up.
(5) Set the HOLD switch on the adjusting remote commander to the HOLD (right (ADJ)) position.

7. Adjustment Finishing Procedure

Order	Page	Address	Data	Description	Remarks
1.	E or F			Check if adjusted data are written correctly to the given page and address.	
2.	2	FF	00	Set data 00 to given page and address.	Page 2: Reset
3.	0	FF	00		Page E or F: Write protect
4.	Set HOLD switch on adj. remote commander to NOR position.				

8. Password Reset (for operation check of the set)
(1) Turn the POWER switch on, then press the “Password Reset” at the bottom of Power Box to reset the password set by the customer.
(2) Operating the jog dial, select “No” on the Password Set screen to set “disuse of password”.
Or,

Order	Page	Address	Data	Description	Remarks
1.	0	01	01	Set data 01 to given page and address.	Page E or F: Cancel protect
2.	E or F	04	FF	Set data FF to given page and address and press PAUSE.	Set disuse of password
Final:	After all adjustments and operation check finished, turn the POWER switch on, press the "Password Reset" at the bottom of Power Box, and turn the POWER switch off.				

9. EXT. VIDEO AUDIO mode: Turn the POWER switch on, and press and operate the jog dial from the initial screen.
Or,

Order	Page	Address	Data	Description	Remarks
1.	2	00	01	Set data 01 to given page and address.	
2.	2	2B	00	Set data 00 to given page and address.	

10. Picture and tone quality standard setting: Press the MENU button and set the BRIGHT control.
Or,
Set data 01 to page:0, address:01 to cancel the protect on page F.

Order	Page	Address	Data	Description	Remarks
	F	7B	3F	Set data 3F to given page and address, and press PAUSE.	Ope. – Brightness: Center
	F	53	40	Set data 40 to given page and address, and press PAUSE.	Ope. – Contrast: Center
	F	50	3F	Set data 3F to given page and address, and press PAUSE.	Ope. – Hue: Center
	F	51	3F	Set data 3F to given page and address, and press PAUSE.	Ope. – Density: Center
	F	8C	02	Set data 02 to given page and address, and press PAUSE.	Ope.– Bass boost: 0, VOL. limit: OFF

Volume (Display unit) – Maximum

[Preset Data Writing]

Connection:

(1) Connect the adjusting remote commander to the CN501 on MA-324 board, and set the VIDEO mode (S904).

Data Writing Procedure

(1) Set data: 01 to page: 0, address: 01.
(2) Enter the data given in the table below.
Note: To write the data to the EEPROM, press the PAUSE button on the adjusting remote commander each time the data is set.
(3) After writing all data, set data: 00 to page: 0, address: FF.

E or F Page Adjustment Address and Initial Value

Make setting and adjustment only when IC502 (EEPROM) was replaced.

E Page:

Address	Data	Remarks
00	01	Fixed value
01	EB	Charge adj.
02	DC	
03	DA	
04	8C	
05	DE	
06	DC	Fixed value
07	05	
08	08	
09	07	
0A	B8	
0B	0B	
0C	60	
0D	54	
0E	40	
0F – FF	–	Not used

F Page:

Address	Data	Remarks
00 – 0F	–	Not used
10	00	Fixed value
11	01	
12	00	
13	FF	
14	01	Video adj.
15	03	Fixed value
16	FF	
17	00	
18	00	
19	FF	
1A	FF	
1B	FF	
1C	FF	
1D	FF	
1E	FF	
1F	FF	
20	00	
21	03	
22	DE	
23	86	
24	12	
25	1F	
26	00	
27	00	

Address	Data	Remarks
28	01	Fixed value
29	03	
2A	02	
2B	05	
2C	1D	
2D	FC	
2E	1F	
2F	18	
30	04	
31	40	
32	10	
33	06	
34	47	
35	03	
36	00	
37	00	
38	00	
39	24	
3A	24	
3B	24	
3C	4C	
3D	4C	
3E	4C	
3F	3F	
40	3F	
41	3F	
42	9C	
43	9C	
44	9C	
45	00	
46	00	
47	00	
48	40	
49	40	
4A	40	
4B	C1	
4C	C0	
4D	C0	
4E	41	
4F	00	
50	40	
51	3F	
52	7A	Video adj.
53	3F	Fixed value

Address	Data	Remarks
54	5B	Video adj.
55	80	
56	87	H-Sync adj.
57	80	Loading adj.
58	00	Fixed value
59	00	
5A	00	
5B	00	
5C	80	
5D	80	
5E	80	
5F	AE	
60	AE	
61	AE	
62	03	
63	03	
64	03	
65	2F	
66	2F	
67	2F	
68	65	R Gain adj.
69	65	G Gain adj.
6A	65	B Gain adj.
6B	94	R Bias adj.
6C	94	G Bias adj.
6D	94	B Bias adj.
6E	80	Fixed value
6F	80	
70	80	
71	80	
72	80	
73	80	
74	9A	SigCen adj.
75	35	V COM R adj.
76	35	V COM L adj.
77	00	Fixed value
78	3E	Sid Lvl adj.
79	6A	Prg Lvl adj.
7A	60	Blk Lim adj.
7B	1F	Fixed value
7C	00	
7D	FF	
7E	5B	Battery down adj.
7F	63	

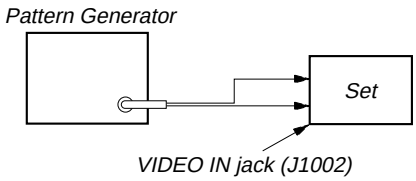
Address	Data	Remarks
80	73	Battery down adj.
81	7B	
82	80	
83	01	
84	49	Fixed value
85	FF	
86	00	
87	00	
88	00	
89	00	
8A	00	
8B	00	
8C	02	
8D	00	
8E	00	
8F	00	
90	80	
91	41	
92	00	
93	00	
94	80	
95	41	
96	5D	Video adj.
97	29	
98	4F	
99	FF	Fixed value
9A	80	
9B	FF	
9C	01	
9D	FF	
9E	FF	
9F	FF	
A0	81	
A1	38	
A2	20	
A3	3A	
A4	1C	
A5	40	
A6	45	
A7	42	
A8	45	
A9	42	
AA	A5	
AB	44	
AC	A5	
AD	44	
AE	C0	
AF	46	
B0	A1	
B1	4F	
B2	D8	
B3	52	
B4	11	
B5	55	
B6	26	
B7	58	
B8	22	

Address	Data	Remarks
B9	48	Fixed value
BA	5B	
BB	4A	
BC	17	
BD	21	
BE	A8	
BF	22	
C0	CB	
C1	1A	
C2	CF	
C3	1B	
C4	0C	
C5	26	
C6	22	
C7	28	
C8	99	
C9	1E	
CA	EE	
CB	1F	
CC	E1	
CD	1C	
CE	10	
CF	1E	
D0	B2	
D1	25	
D2	BE	
D3	27	
D4	D9	
D5	1D	
D6	1E	
D7	1F	
D8	1D	
D9	2D	
DA	14	
DB	30	
DC	68	
DD	1A	
DE	68	
DF	1A	
E0	B4	
E1	28	
E2	19	
E3	2B	
E4	1D	
E5	2D	
E6	14	
E7	30	
E8	AD	
E9	25	
EA	B8	
EB	27	
EC	AD	
ED	1D	
EE	EE	
EF	1E	
F0	84	
F1	28	

Address	Data	Remarks
F2	E3	Fixed value
F3	2A	
F4	B6	
F5	38	
F6	78	
F7	3D	
F8	CC	
F9	1A	
FA	03	
FB	00	
FC	00	
FD	00	
FE	00	Charge adj.
FF	FF	Fixed value

VIDEO BLOCK

To adjust the video block, connect a pattern generator as shown below. As video input signals for adjustment, enter video output signals (color bar signals), unless otherwise specified.



Preparation:

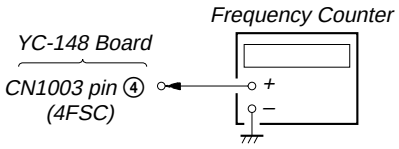
		Page	Address	Data
Sub-Color	PAL	F	54	5B
	(NTSC)	(F)	(54)	(80)
Switch the Signal mode	PAL	F	14	01
	(NTSC)	(F)	(14)	(00)

[4fsc FreeRun Adjustment]

Condition:

Input signal	No signal
Measurement point	YC-148 board CN1003 pin ④
Measuring equipment	Frequency Counter
Adjustment page	F
Adjustment address	55
Specification value	17.73450 MHz ± 20 Hz (PAL)

Connection:



Adjustment Procedure:

(1) Connect a frequency counter to the CN1003 pin ④ on the YC-148 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 55, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the frequency counter reading satisfies the specification value.

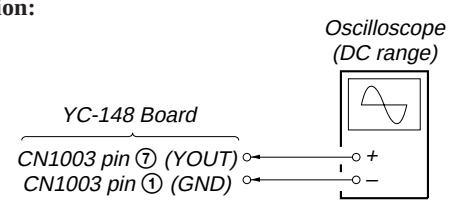
Adjustment and Adjustment Parts: YC-148 board (see page 3-15)

[Video Mute Level Adjustment]

Condition:

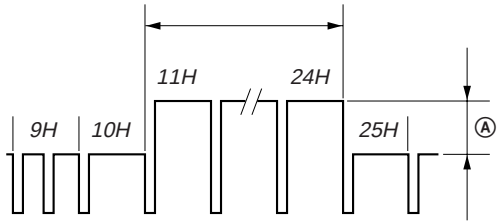
Input signal	All black (IRE 0%) signal (No set up)
Measurement point	YC-148 board CN1003 pin ⑦
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	52
Specification value	0 ± 0.03 Vp-p

Connection:



Adjustment Procedure:

(1) Connect a oscilloscope to the CN1003 pin ⑦ on the YC-148 board.
(2) Set (or confirm) data: 01 to page 0, address 01. (Cancel F page protect)
(3) On page F, address: 52, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓐ level of wafeform on the oscilloscope satisfies the specification value.



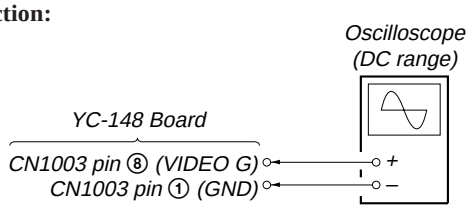
Adjustment and Adjustment Parts: YC-148 board (see page 3-15)

[Video Contrast Adjustment]

Condition:

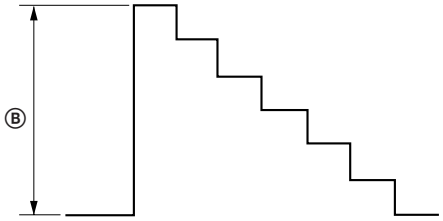
Input signal	10 step signal (Whie: 100 IRE level)
Measurement point	YC-148 board CN1003 pin ⑧
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	96
Specification value	0.7 ± 0.02 Vp-p

Connection:



Adjustment Procedure:

(1) Connect a oscilloscope to the CN1003 pin ⑧ on the YC-148 board.
(2) Set (or confirm) data: 01 to page 0, address 01. (Cancel F page protect)
(3) On page F, address: 96, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓑ level of wafeform on the oscilloscope satisfies the specification value.



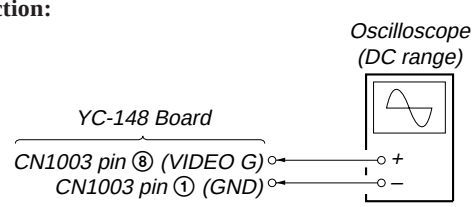
Adjustment and Adjustment Parts: YC-148 board (see page 3-15)

[Color Adjustment]

Condition:

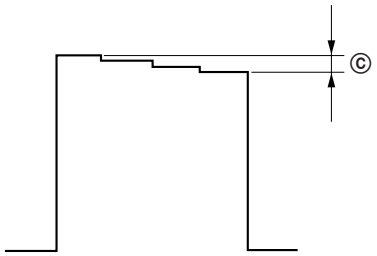
Input signal	Color bar signal
Measurement point	YC-148 board CN1003 pin ⑧
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	98
Specification value	0 ± 0.02 Vp-p

Connection:



Adjustment Procedure:

(1) Connect a oscilloscope to the CN1003 pin ⑧ on the YC-148 board.
(2) Set (or confirm) data: 01 to page 0, address 01. (Cancel F page protect)
(3) On page F, address: 98, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓒ level of wafeform on the oscilloscope satisfies the specification value.



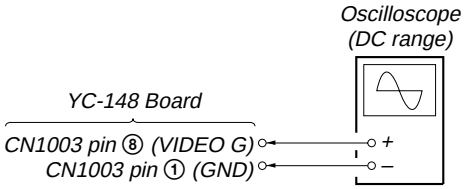
Adjustment and Adjustment Parts: YC-148 board (see page 3-15)

[Hue Adjustment]

Condition:

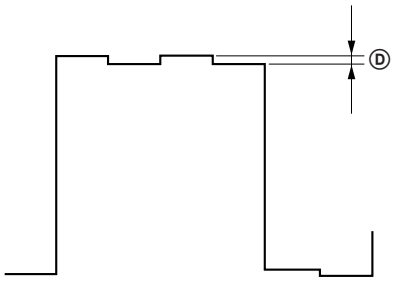
Input signal	Color bar signal
Measurement point	YC-148 board CN1003 pin ⑧
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	97
Specification value	0 ± 0.02 Vp-p

Connection:



Adjustment Procedure:

(1) Connect a oscilloscope to the CN1003 pin ⑧ on the YC-148 board.
(2) Set (or confirm) data: 01 to page 0, address 01. (Cancel F page protect)
(3) On page F, address: 97, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓓ level of wafeform on the oscilloscope satisfies the specification value.



Adjustment and Adjustment Parts: YC-148 board (see page 3-15)

PC BLOCK

- To adjust the PC block, set the PC mode on the set.
- For the PC block adjustment, input a PC RGB signals. (J101 on the MA-324 board) The pin No. and signal name of J101 is listed below.

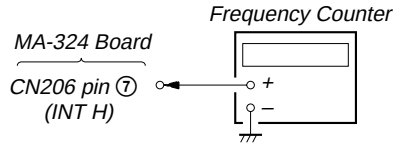
Pin No.	Signal Name	Pin No.	Signal Name
1	Red	9	Sync GND
2	Green	10	GND
3	Blue	11	GND
4	–	12	–
5	GND	13	H-Sync
6	RGB GND	14	V-Sync
7	RGB GND	15	–
8	RGB GND		

[H-Sync Frequency Adjustment]

Condition:

Input signal	No signal
Measurement point	MA-324 board CN206 pin ⑦
Measuring equipment	Frequency Counter
Adjustment page	F
Adjustment address	56
Specification value	38 ± 1 kHz

Connection:



Adjustment Procedure:

(1) Connect a frequency counter to the CN206 pin ⑦ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 56, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the frequency counter reading satisfies the specification value.

Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[Signal Center Level Adjustment]

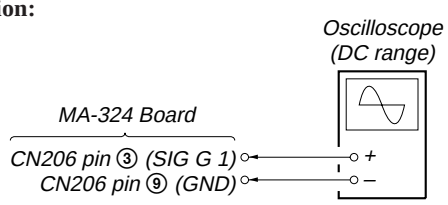
Preparation:

Page	Address	Data	Remarks
F	7B	1F	BRIGHT (Center)
F	11	03	BRIGHT (Fixed)

Condition:

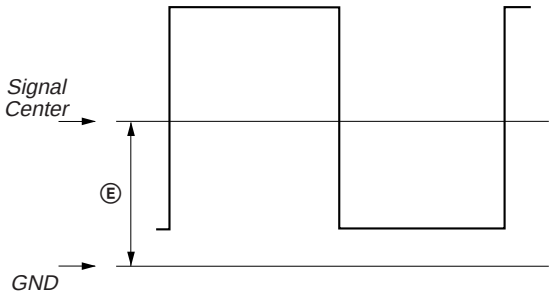
Input signal	SVGA60 Hz: All Black
Measurement point	MA-324 board CN206 pin ③
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	74
Specification value	7.0 ± 0.1 V

Connection:



Adjustment Procedure:

(1) Connect a frequency counter to the CN206 pin ③ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 74, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓔ level of waveform on the oscilloscope.



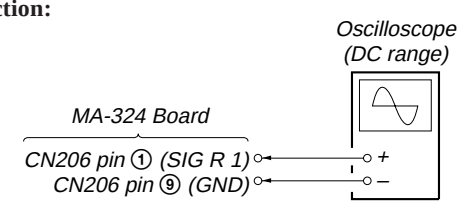
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[R Gain Adjustment]

Condition:

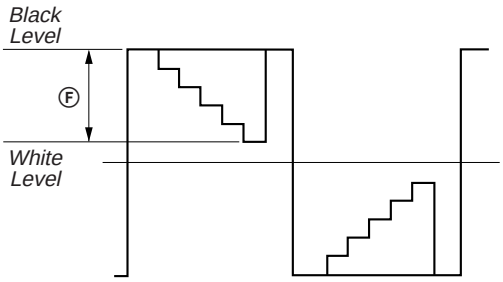
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ①
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	68
Specification value	2.7 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ① on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) On page: F, address: 68, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that Ⓕ level of waveform on the oscilloscope satisfies the specification value.



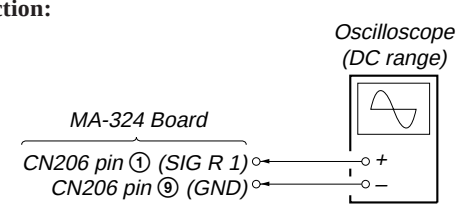
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[R Bias Adjustment]

Condition:

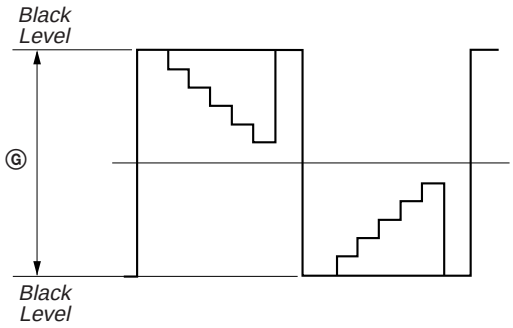
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA: 324 board CN206 pin ①
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	6B
Specification value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ① on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) On page: F, address: 6B, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓖ level of waveform on the oscilloscope satisfies the specification value.



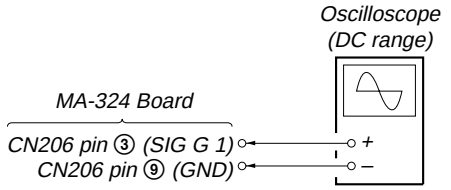
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[G Gain Adjustment]

Condition:

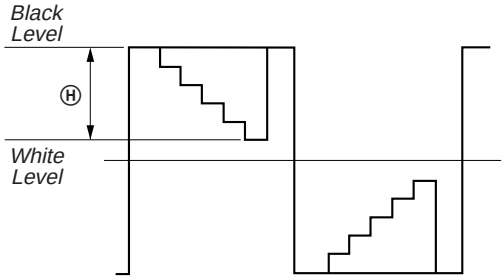
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ③
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	69
Specification value	2.7 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ③ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) On page: F, address: 69, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that Ⓗ level of waveform on the oscilloscope satisfies the specification value.



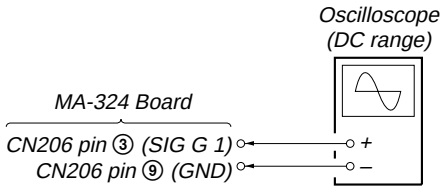
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[G Bias Adjustment]

Condition:

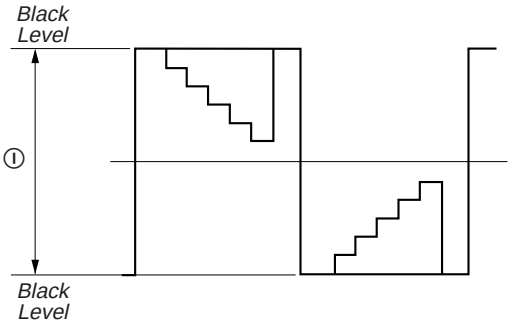
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ③
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	6C
Specification value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ③ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 6C, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓘ level of waveform on the oscilloscope satisfies the specification value.



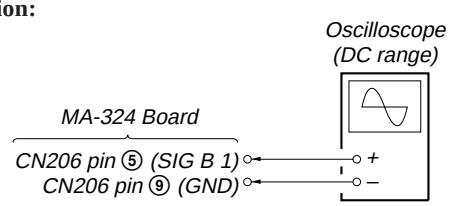
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[B Gain Adjustment]

Condition:

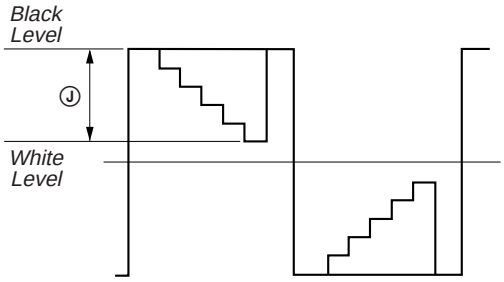
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑤
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	6A
Specification value	2.7 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ⑤ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 6A, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓙ level of waveform on the oscilloscope satisfies the specification value.



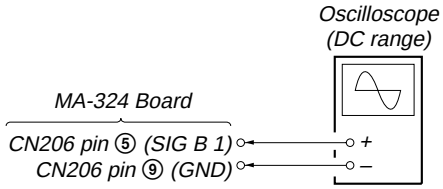
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[B Bias Adjustment]

Condition:

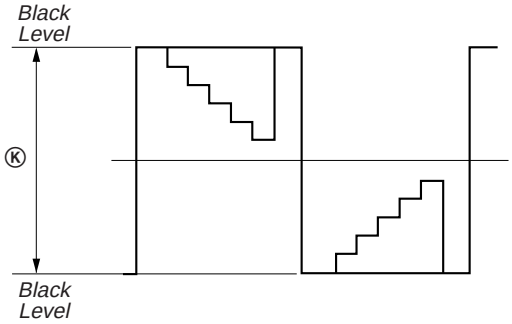
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑤
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	6D
Specification value	8.4 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ⑤ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 6D, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓚ level of waveform on the oscilloscope satisfies the specification value.



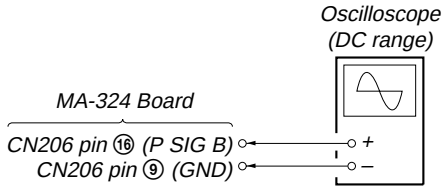
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[SID Level Adjustment]

Condition:

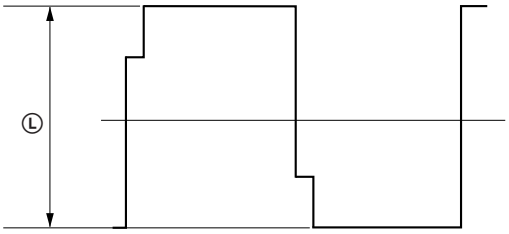
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑯
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	78
Specification value	9.1 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ⑯ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 78, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓛ level of waveform on the oscilloscope satisfies the specification value.



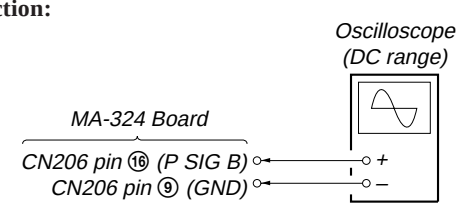
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[PRG Level Adjustment]

Condition:

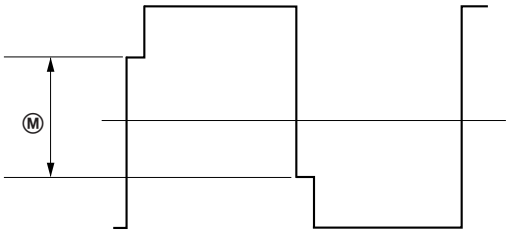
Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑯
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	79
Specification value	6.8 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ⑯ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 79, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓜ level of waveform on the oscilloscope satisfies the specification value.



Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[Black Limitte Adjustment]

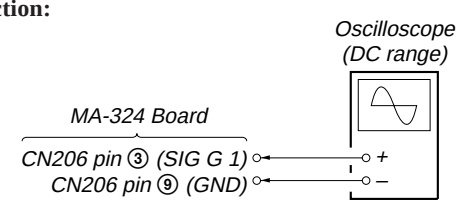
Preparation:

Page	Address	Data	Remarks
F	11	01	Cancel protect of BRIGHT
F	7B	10	Change the BRIGHT level

Condition:

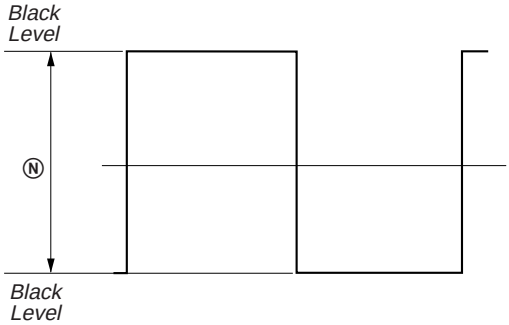
Input signal	SVGA 60 Hz: RGB ALL Black
Measurement point	MA-324 board CN206 pin ③
Measuring equipment	Oscilloscope
Adjustment page	F
Adjustment address	7A
Specification value	8.7 ± 0.1 Vp-p

Connection:



Adjustment Procedure:

(1) Connect an oscilloscope to the CN206 pin ③ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01. (Cancel F page protect)
(3) On page: F, address: 7A, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the Ⓝ level of waveform on the oscilloscope satisfies the specification value.
(4) Set data: 1F to page F, address: 7B.



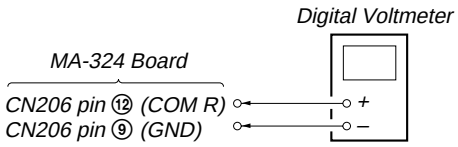
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[VCOM R Adjustment]

Condition:

Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑫
Measuring equipment	Degital voltmeter
Adjustment page	F
Adjustment address	75
Specification value	6.64 ± 0.02 V

Connection:



Adjustment Procedure:

(1) Connect a digital voltmeter to the CN206 pin ⑫ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) On page: F, address: 75, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the digital voltmeter reading satisfies the specification value.

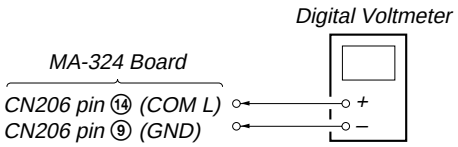
Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[VCOM L Adjustment]

Condition:

Input signal	SVGA 60 Hz: RGB 0.7 Vp-p, 16 Step
Measurement point	MA-324 board CN206 pin ⑭
Measuring equipment	Digital voltmeter
Adjustment page	F
Adjustment address	76
Specification value	6.64 ± 0.02 V

Connection:



Adjustment Procedure:

(1) Connect a digital voltmeter to the CN206 pin ⑭ on the MA-324 board.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) On page: F, address: 76, change data with the PLAY and STOP buttons and press the PAUSE button to write data so that the digital voltmeter reading satisfies the specification value.

Adjustment and Adjustment Parts: MA-324 board (see page 3-15)

[White Balance Adjustment]

Preparation:

Set data: 1F to page: F, address: 7B.

Condition:

Input signal	SVGA 60 Hz: White (50%)
Measurement point	LCD R screen
Measuring equipment	Video camera
Adjustment page	F
Adjustment address	6B, 6D
Specification value	With no color

Adjustment Procedure:

(1) LCD R screen on video camera.
(2) Set (or confirm) data: 01 to page: 0, address: 01.
(Cancel F page protect)
(3) Page: F, address: 6B, 6D
Change data at these two addresses with the PLAY and STOP buttons and press the PAUSE button to write data so that the F page data of looking into the finder.
Adjust it so that the finest white can be seen.

POWER SAVING

[Power Saving Sensor Adjustment]

Mode	PC
Signal	No signal
Measurement point	Displayed data on adj. remote commander
Measurement equipment	
Adjustment page	F
Adjustment address	57

Adjustment Procedure:

(1) Place the specified board 6.5 cm away from sensor.
(2) Set data: 08 to page: F, address 8C.
(3) Find the value when the highest bit of the data on page: 3, address: 12 changes to “H” with raising the data on page: F, address: 57 from the initial value data: 40h by 08h.
(4) Set data: 00 to page: 0, address: FF.
(5) Set data: 02 to page: F, address: 8C.

Note: It is necessary to input data: 03 to page: 0, address: FF before reading the data in page: 03. Also without input the data: 00 to page: 0, address: FF, you cannot input any data to page: F after the data in page: 3 is read.

POWER SUPPLY BLOCK

[Change Adjustment]

Mode	PC
Signal	RGB IN: No signal PC AUDIO IN: No signal VOLUME: Minimum
Measurement point	Displayed data on adj. remote commander
Measuring equipment	
Adjustment page	E, F
Adjustment address	00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D, 0E (E page) FE (F page)

Connection:
Referring to Fig. 3-4 (see page 3-15), connect the following equipment.
(1) Connect the regulated power supply and a digital voltmeter to DC IN terminal.
(2) Connect the adjusting remote commander to the CN501 on MA-324 board.
(3) Connect a PC to the RGB and PC ADUIO IN terminals.

Menu Setting:
(Picture and tone quality standard setting) (see page 3-4)

Adjustment Procedure:
(1) Adjust the output voltage of regulated power supply so that DC IN terminal voltage (DD-107 board J701) is 8.85 ± 0.01 Vdc.
(2) Turn ON the POWER switch on the set.
(3) Set data: 03 to page: 0, address: FF.
(4) Set data: 0A to page: 2, address: 01.
(5) Read data (XXh) on page: 3, address: 74.
(6) Set data: 00 to page: 0, address: FF.
(7) Set data: 01 to page: 0, address: 01. (Cancel E and F page protect)
(8) Using the following formulas (calculation of hexadecimal numbers), calculate the adjustment data and enter them to respective adjustment addresses.
(Refer to 5. Data Processing on page 3-3)
Page: E Address: 00 E_{00} = 01
Page: E Address: 01 E_{01} = XXh
Page: F Address: FE F_{FE} = XXh – 39h
(9) Set data: 00 to page: 0, address: 01.
(10) Connect the regulated power supply and a digital voltmeter to the battery terminal.
(Keep connecting the regulated power supply to DC IN terminal)
(11) Adjust the output voltage of regulated power supply so that the battery terminal voltage is 8.35 ± 0.01 Vdc.
(12) Set data: 03 to page: 0, address: FF.
(13) Set data: 0A to page: 2, address: 01.
(14) Read data (YYh) on page: 3, address: 75.
(15) Set data: 00 to page: 0, address: FF.
(16) Set data: 01 to page: 0, address: 01.
(17) Using the following formulas (calculation of hexadecimal numbers), calculate the adjustment data and enter them to respective adjustment addresses.
(Refer to 5. Data Processing on page 3-3)
Page: E Address: 02 E_{02} = YYh
Page: E Address: 03 E_{03} = YYh – 02h
Page: E Address: 04 E_{04} = YYh – 55h
Page: E Address: 05 E_{05} = YYh + 02h
Page: E Address: 06 E_{06} = DC
Page: E Address: 07 E_{07} = 05
Page: E Address: 08 E_{08} = 08
Page: E Address: 09 E_{09} = 07
Page: E Address: 0A E_{0A} = B8
Page: E Address: 0B E_{0B} = 0B
Page: E Address: 0C E_{0C} = 60
Page: E Address: 0D E_{0D} = 54
Page: E Address: 0E E_{0E} = 40
(18) Set data: 00 to page: 0, address: 01.
Note: After setting each data, be sure to press the PAUSE button on the adjusting remote commander.

[Battery Down Adjustment]

Mode	PC
Signal	RGB IN: No signal PC AUDIO IN: No signal VOLUME: Minimum
Measurement point	Displayed data on adj. remote commander
Measuring equipment	
Adjustment page	F
Adjustment address	7E, 7F, 80, 81, 82, 83

Connection:
Referring to Fig. 3-4 (see page 3-15), connect the following equipment.
(1) Connect the regulated power supply and a digital voltmeter to the battery terminal.
(2) Connect the adjusting remote commander to the CN501 on MA-324 board.
(3) Connect a pattern generator to the RGB and PC AUDIO IN terminal.

Menu Setting:
(Picture and tone quality standard setting) (see page 3-4)

Adjustment Procedure:
(1) Adjust the output voltage of regulated power supply so that the battery terminal voltage is 6.0 ± 0.01 Vdc.
(2) Turn ON the POWER switch on the set.
(3) Set data: 03 to page: 0, address: FF.
(4) Set data: 0A to page: 2, address: 01.
(5) Read data (ZZh) on page: 3, address: 7D.
(6) Set data: 00 to page: 0, address: FF.
(7) Set data: 01 to page: 0, address: 01. (Cancel F page protect)
(8) Using the following formulas (calculation of hexadecimal numbers), calculate the adjustment data and enter them to respective adjustment addresses.
(Refer to 5. Data Processing on page 3-3)
Page: F Address: 7E F_{7E} = ZZh
Page: F Address: 7F F_{7F} = ZZh + 0Ah
Page: F Address: 80 F_{80} = ZZh + 0Dh
Page: F Address: 81 F_{81} = ZZh + 10h
Page: F Address: 82 F_{82} = ZZh + 16h
Page: F Address: 83 F_{83} = 01
(9) Set data: 00 to page: 0, address: 01.
Note: After setting each data, be sure to press the PAUSE button on the adjusting remote commander.

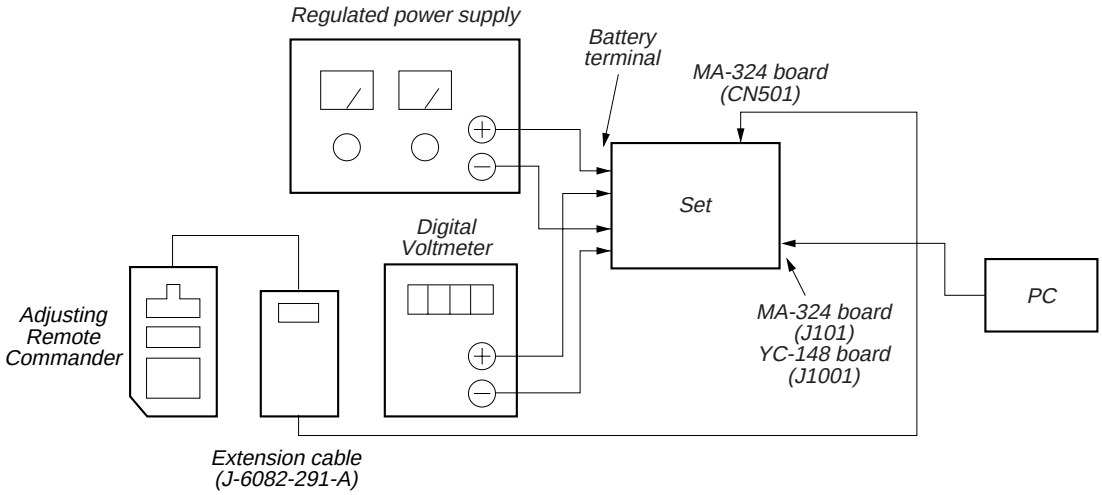
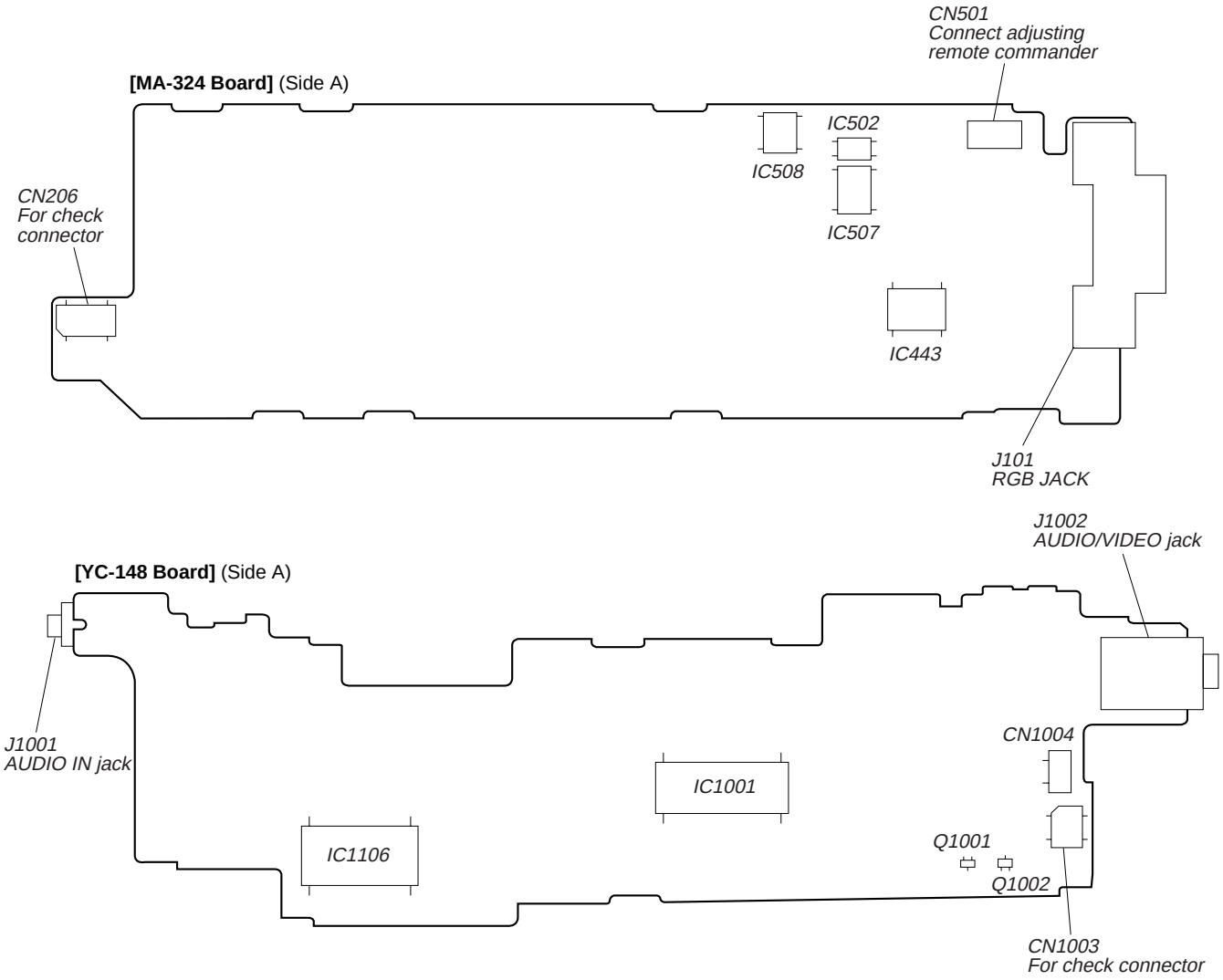


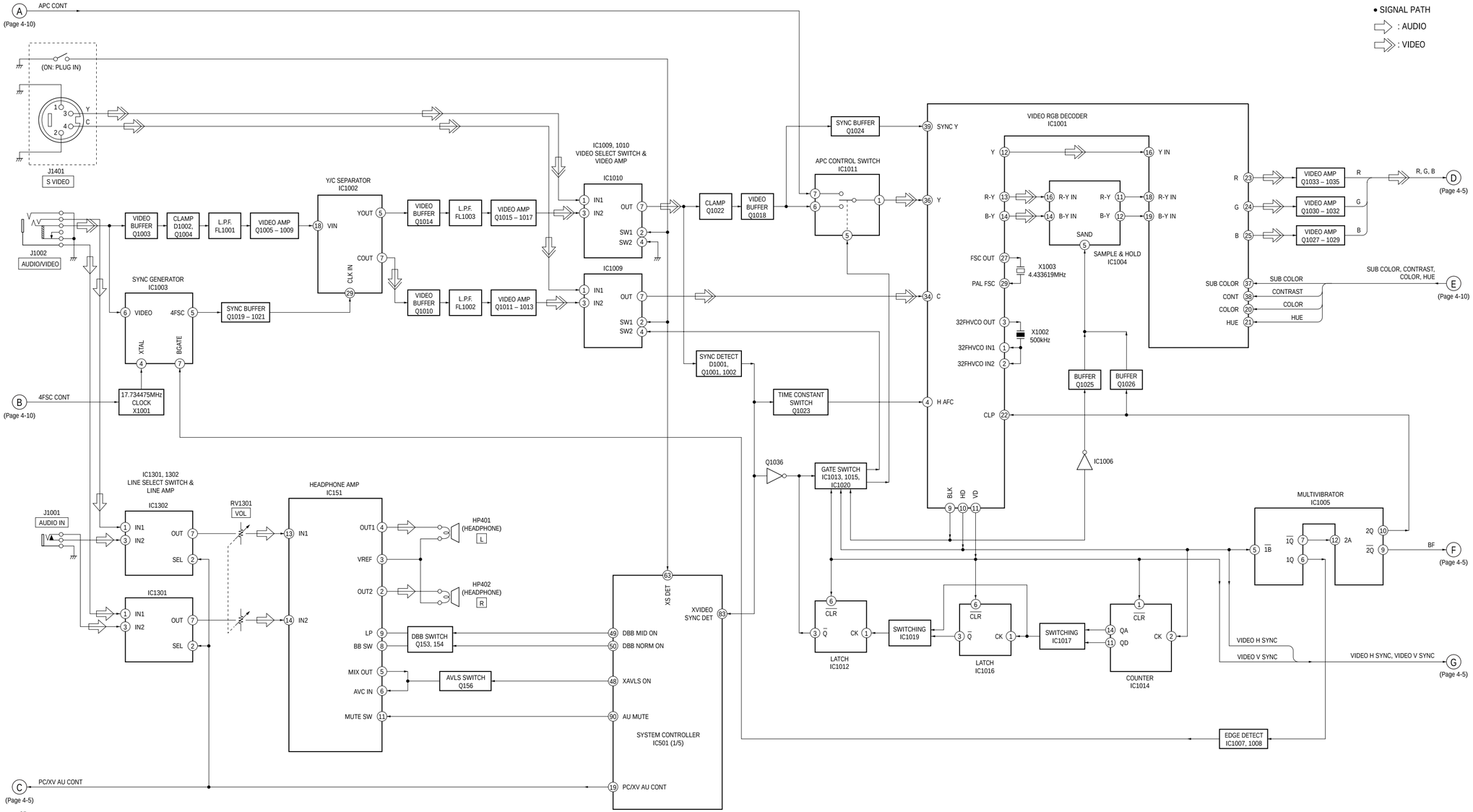
Fig. 3-4

Adjustment and Adjustment Parts:



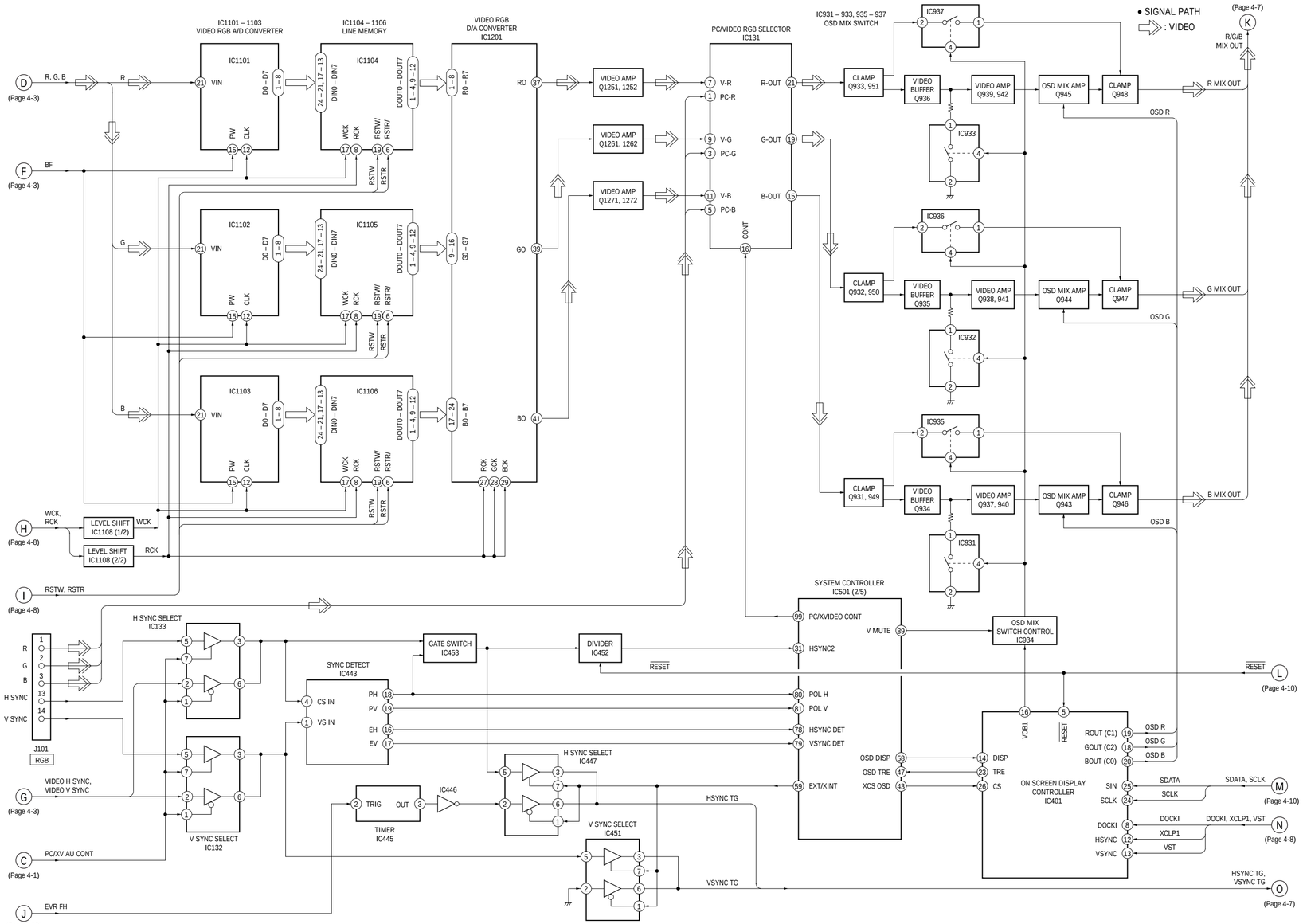
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM – AUDIO/VIDEO Section

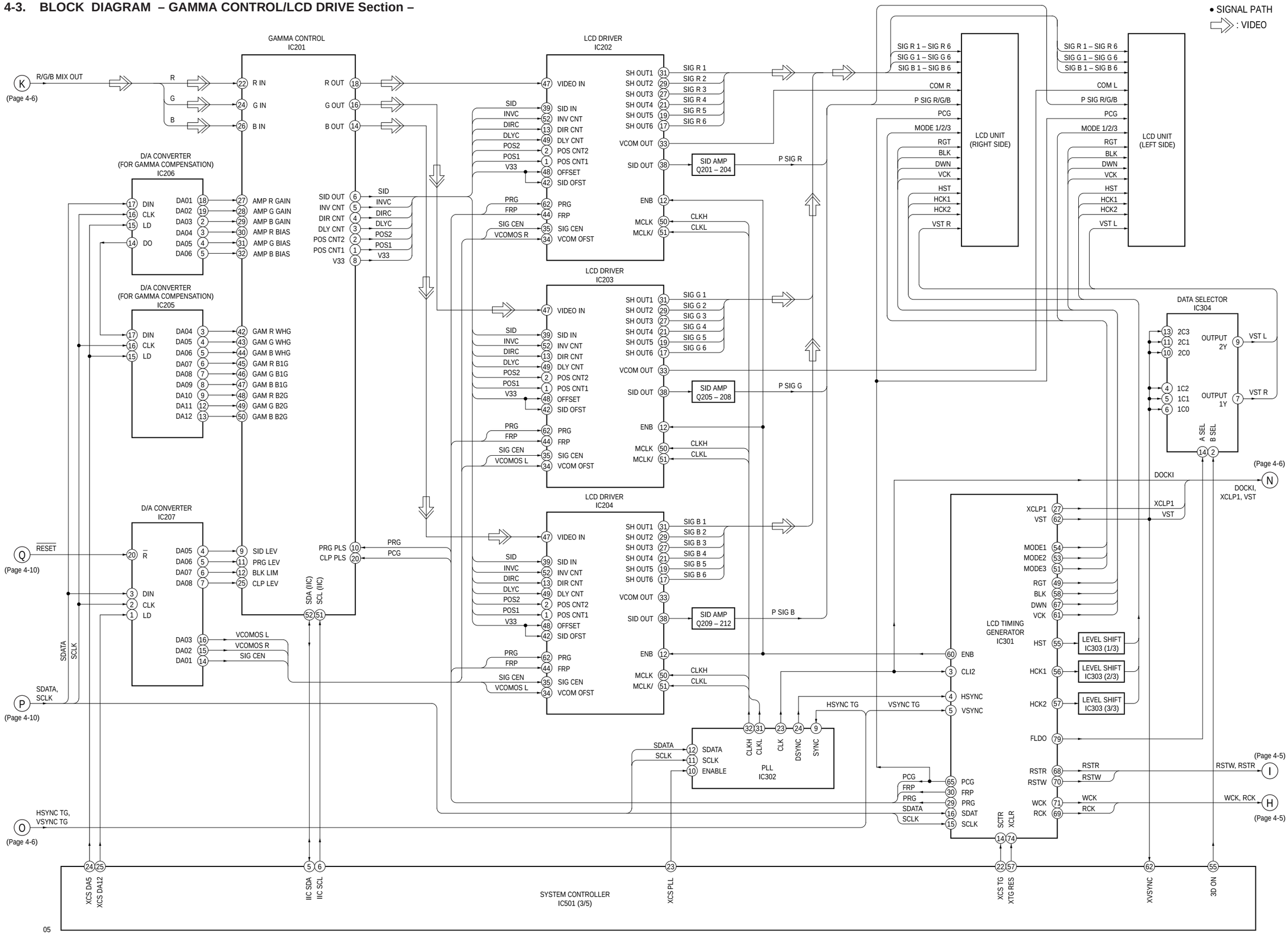


05

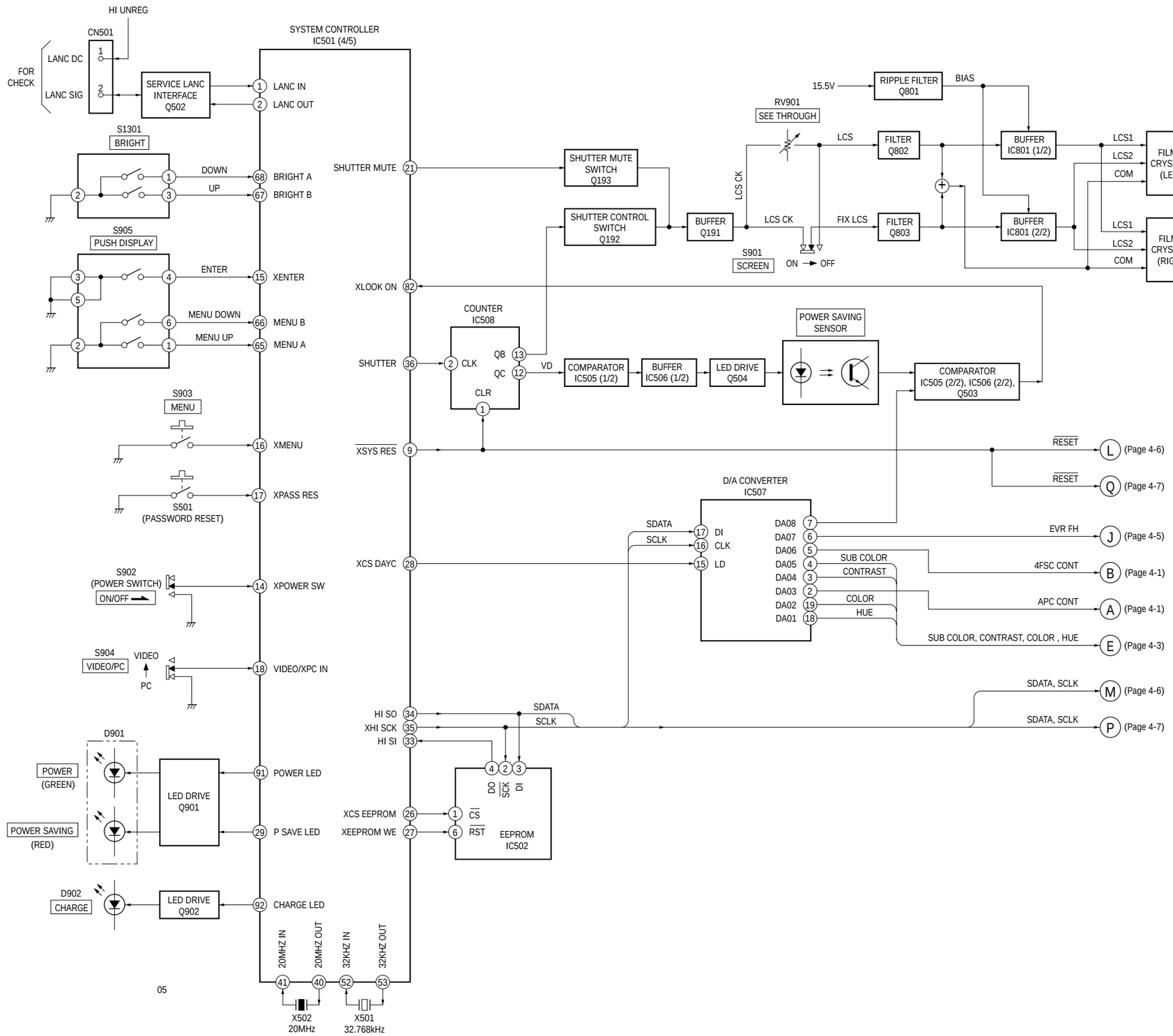
4-2. BLOCK DIAGRAM – A/D, D/A, OSD, SYNC Section –



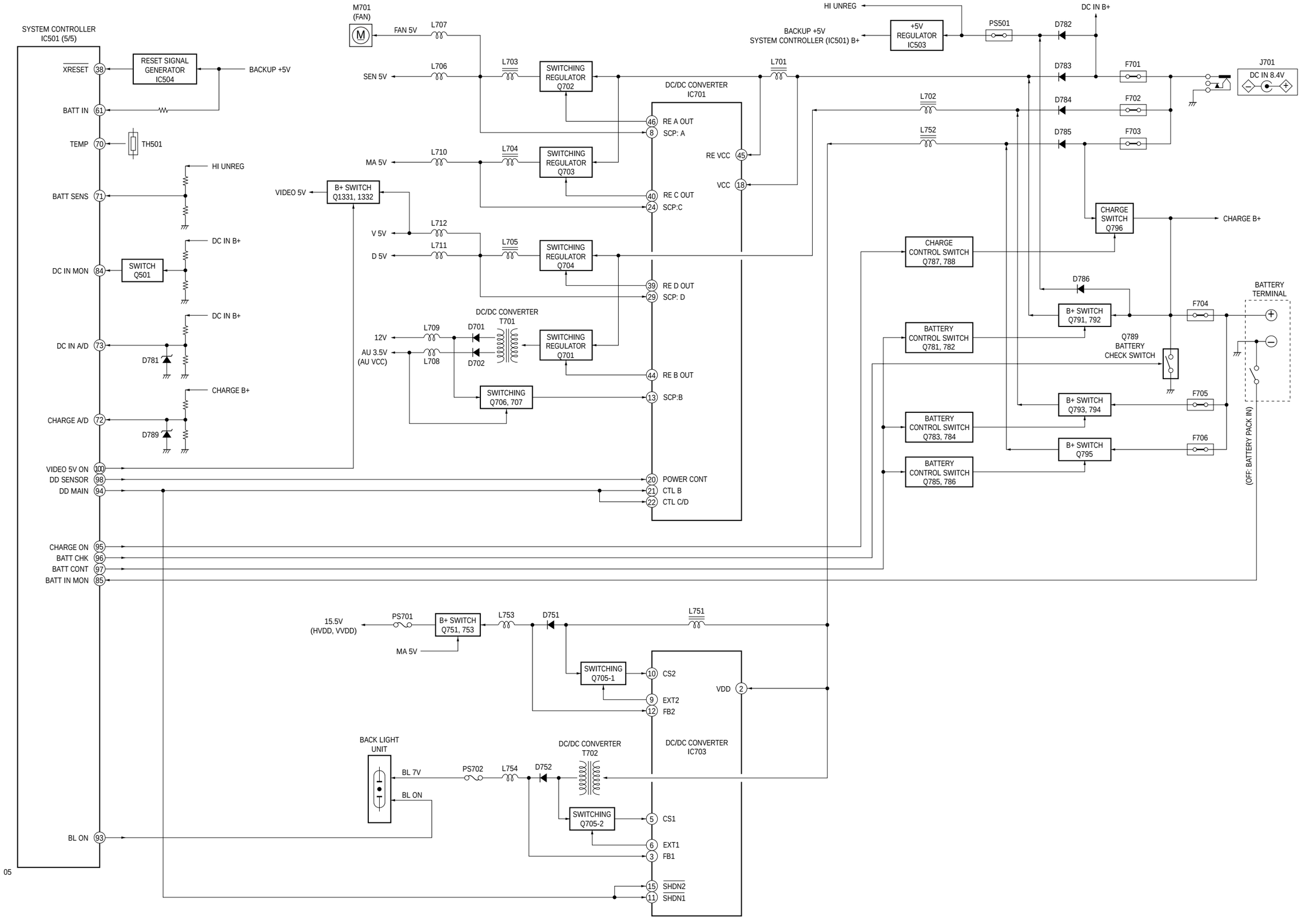
4-3. BLOCK DIAGRAM – GAMMA CONTROL/LCD DRIVE Section –



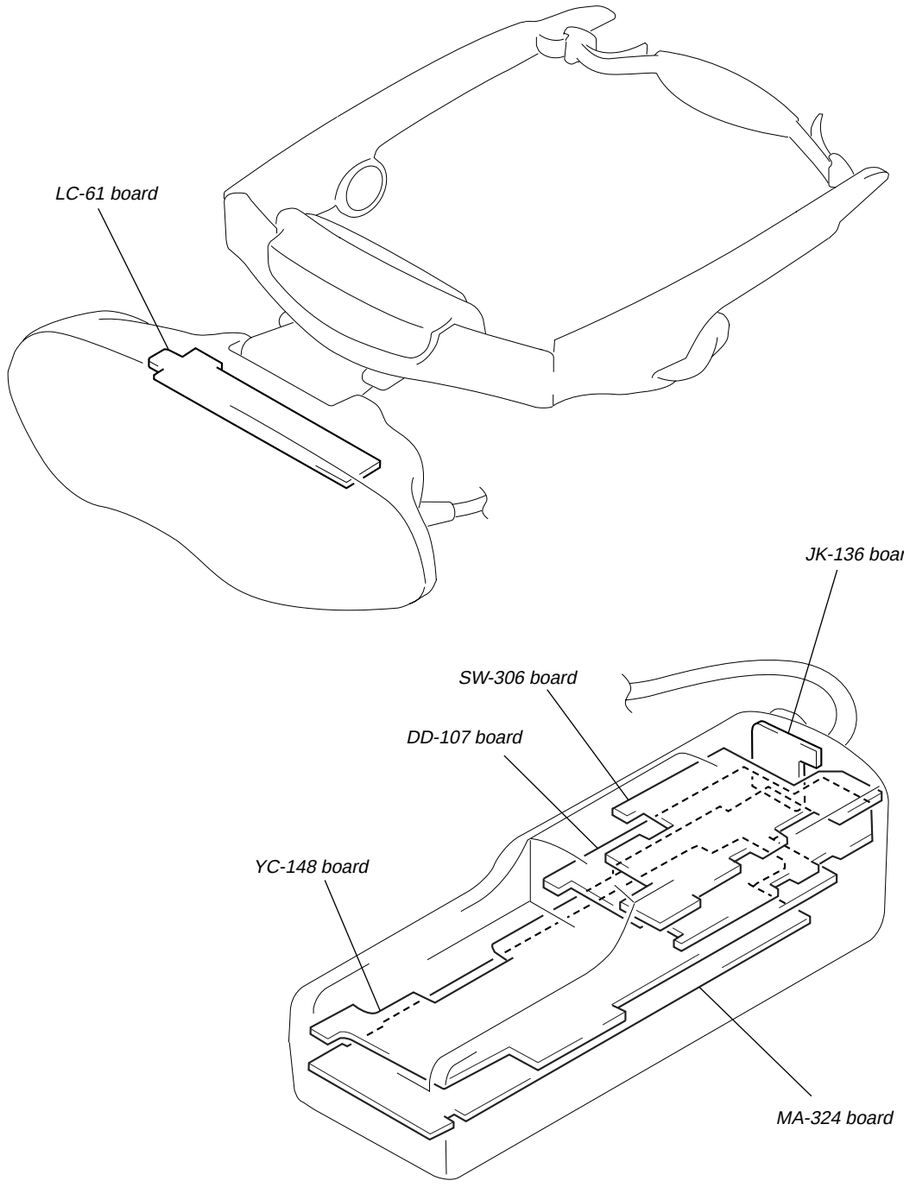
4-4. BLOCK DIAGRAM – MODE CONTROL/SENSOR/LCS Section –



4-5. BLOCK DIAGRAM – POWER SUPPLY Section –



- **Circuit Boards Location**



4-6. NOTES FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

(In addition to this, the necessary note is printed ineach block.)

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- **B +** : B+ Line.
- Power voltage is dc 8.4 V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground in color-bar signal input.
  no mark : VIDEO MODE
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : AUDIO
  ⇨ : VIDEO

Note on Printed Wiring Board:

- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ○ : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.

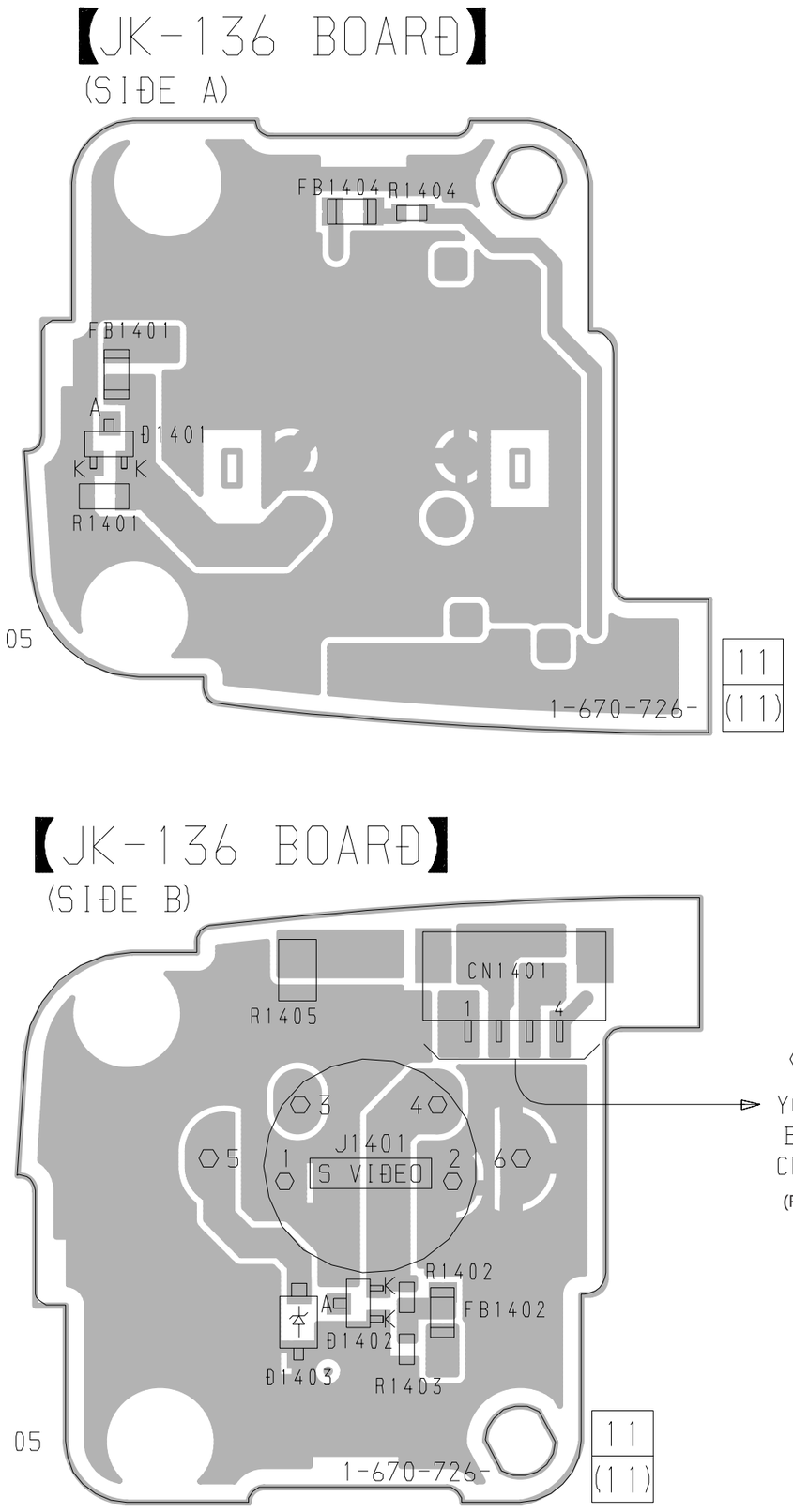
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

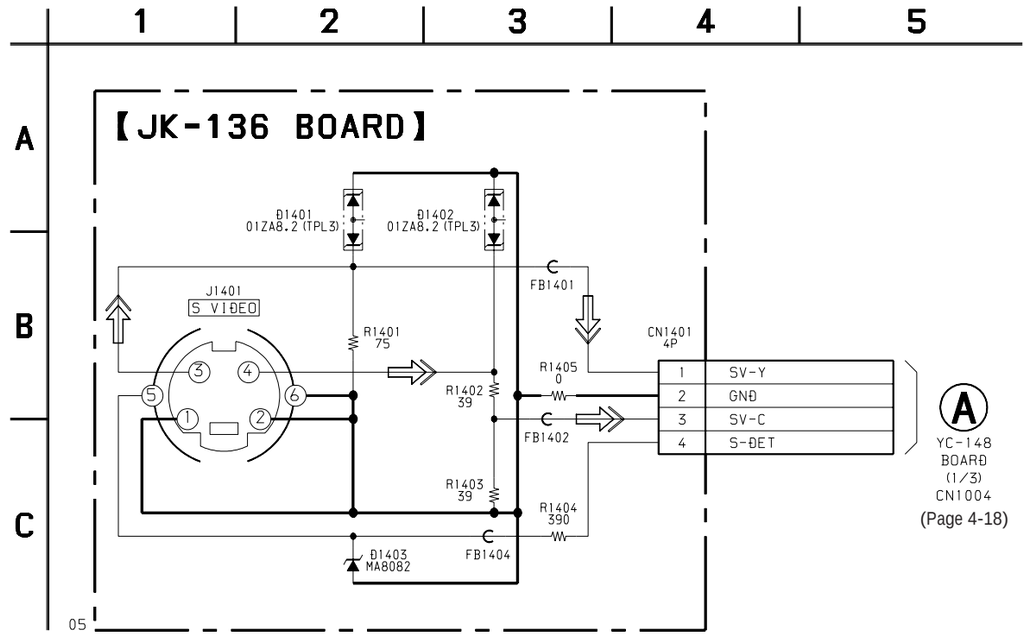
- JK-136, YC-148, MA-324, LC-61, SW-306, and DD-107 boards are multi-layer printed board.
  However, the patterns of intermediate-layer have not been included in the diagram.

- Indication of transistor

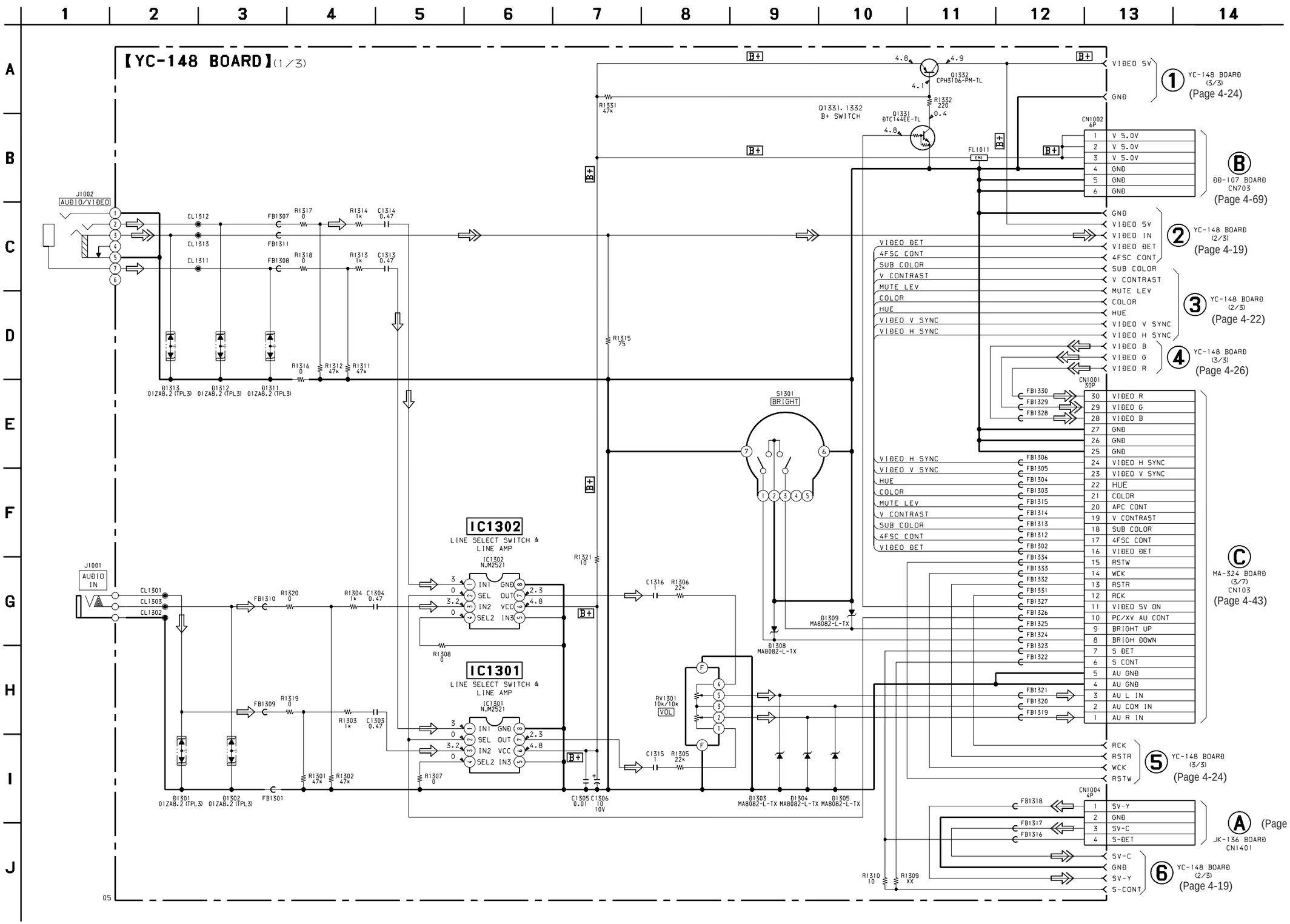
4-7. PRINTED WIRING BOARD – JK-136 Board – • See page 4-13 for Circuit Boards Location.



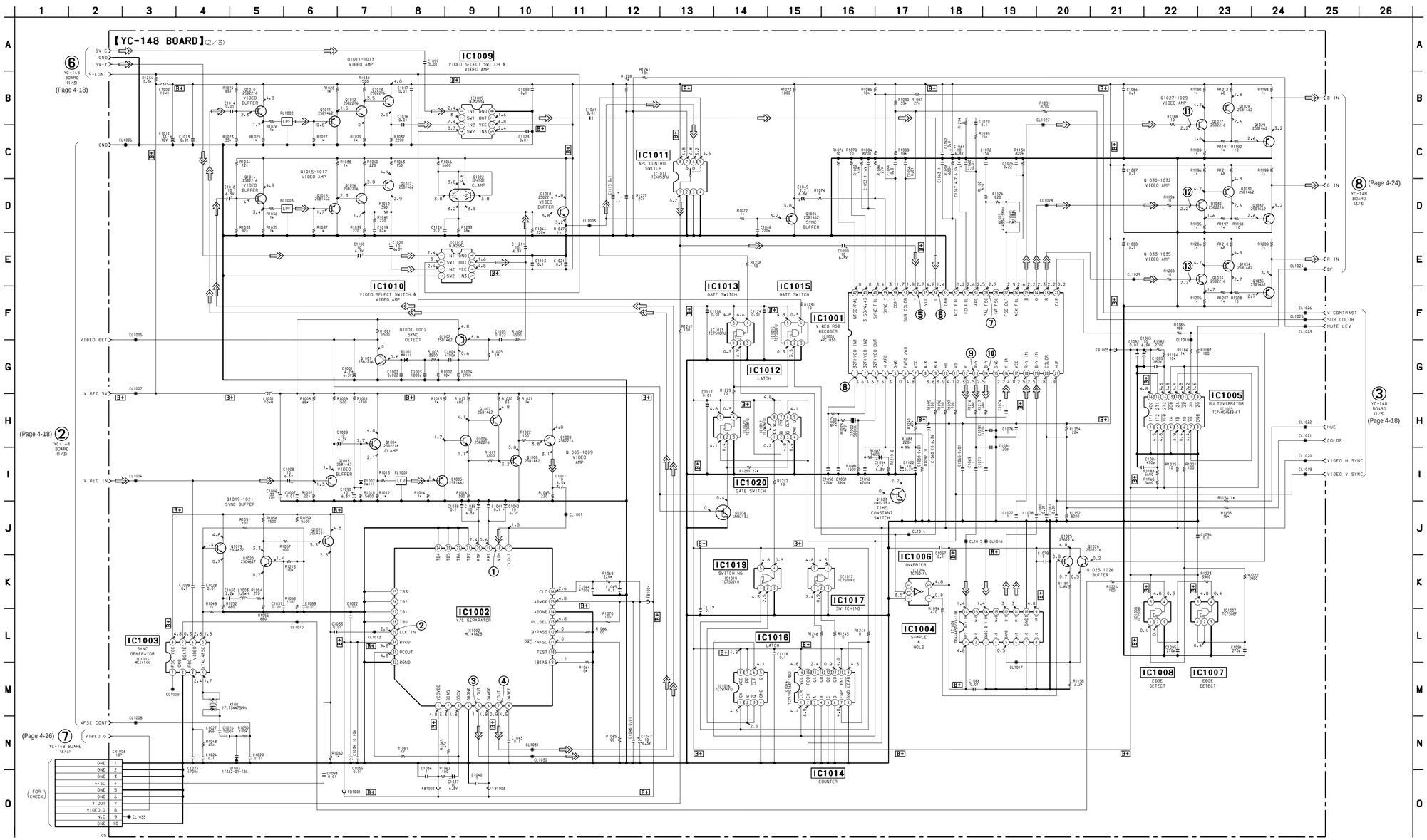
4-8. SCHEMATIC DIAGRAM – JK-136 Board –



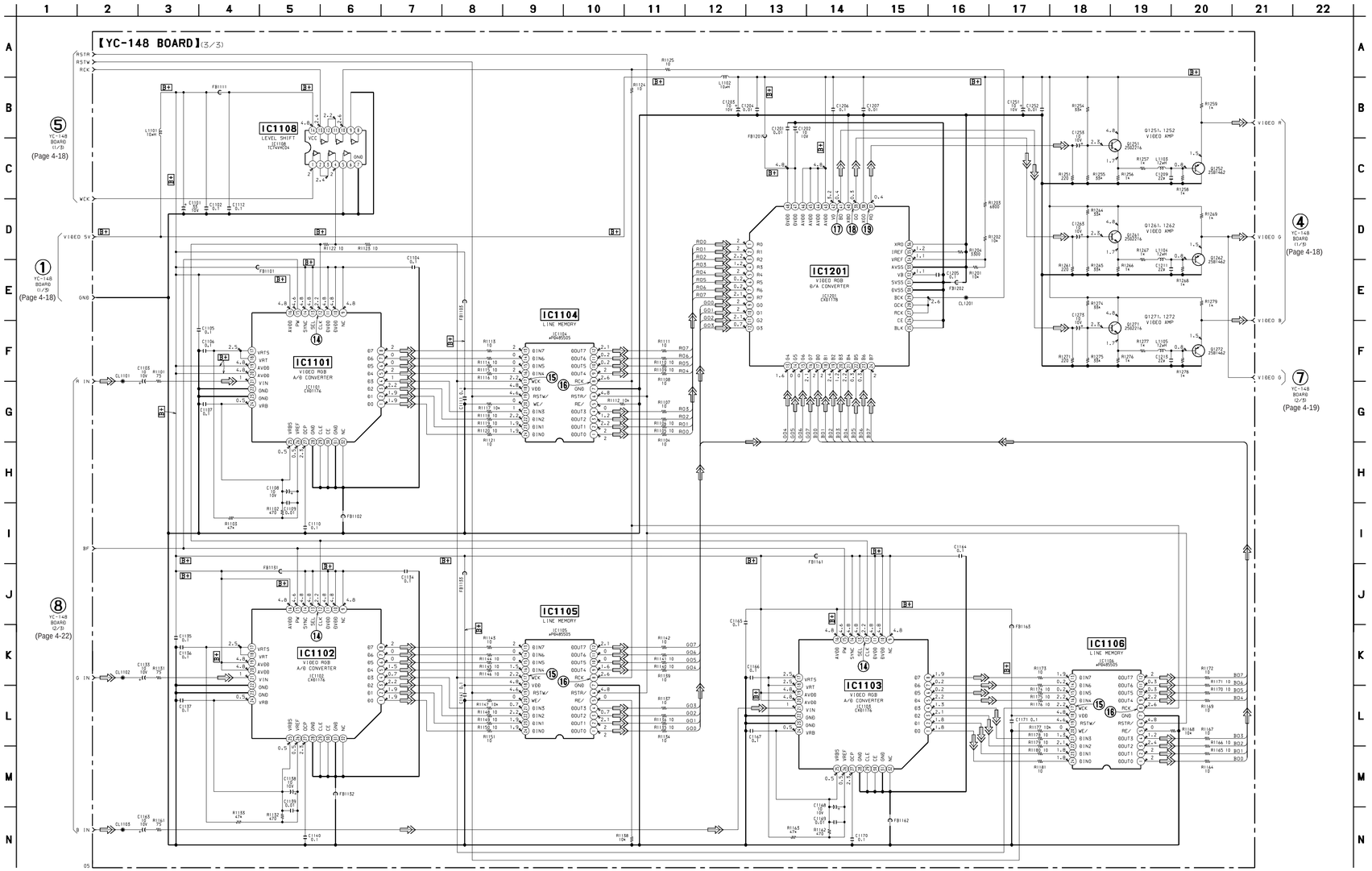
4-9. SCHEMATIC DIAGRAM – YC-148 Board (1/3) – • See page 4-73 for Waveforms. • See page 4-77 for IC Block Diagrams.



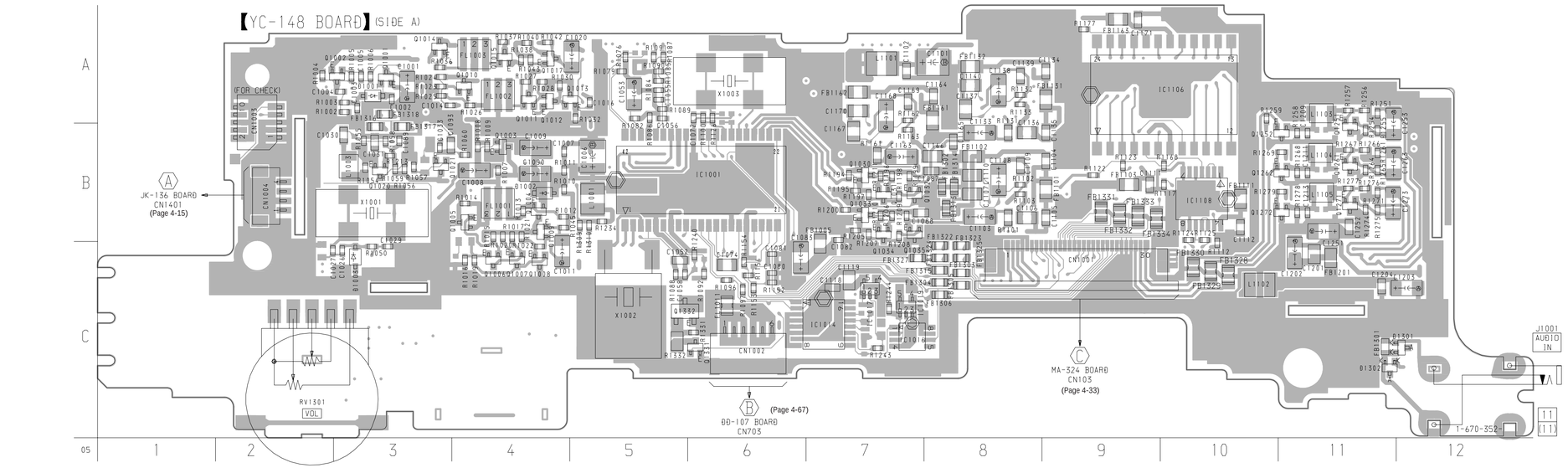
4-10. SCHEMATIC DIAGRAM – YC-148 Board (2/3) – • See page 4-73 for Waveforms. • See page 4-77 for IC Block Diagrams.

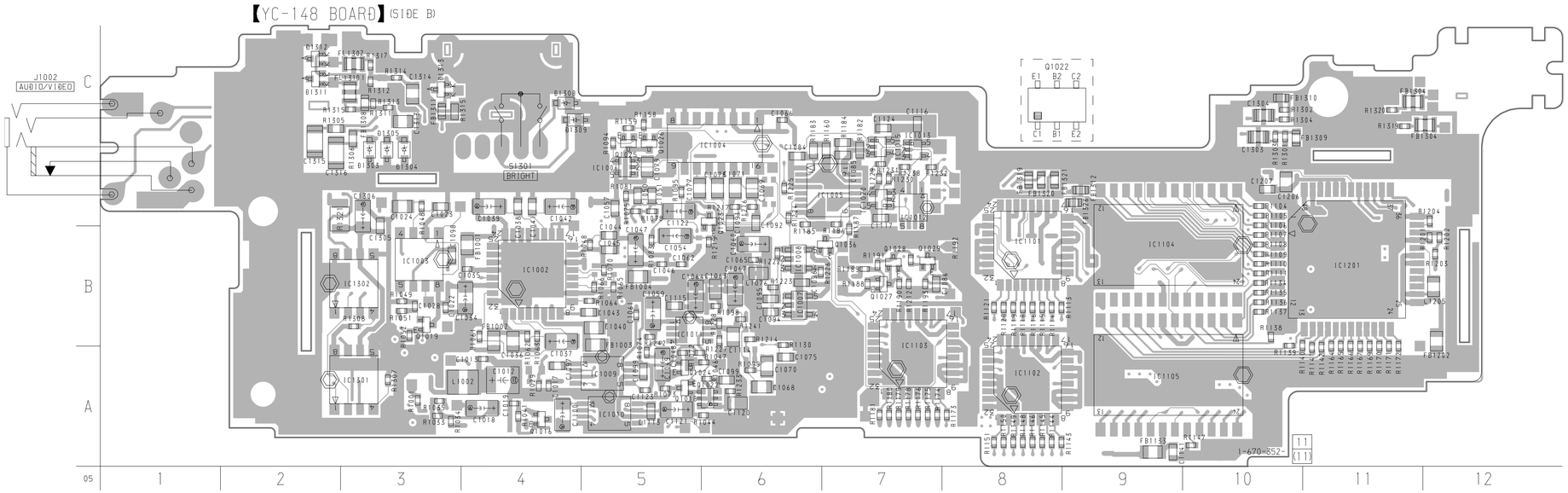


4-11. SCHEMATIC DIAGRAM – YC-148 Board (3/3) – • See page 4-73 for Waveforms. • See page 4-77 for IC Block Diagrams.



4-12. PRINTED WIRING BOARD – YC-148 Board – • See page 4-13 for Circuit Boards Location.





- **Semiconductor Location (Side A)**

Ref. No.	Location	Ref. No.	Location
D1001	A-3	Q1010	A-4
D1002	B-4	Q1011	A-4
D1003	C-3	Q1012	A-4
D1301	C-12	Q1013	A-5
D1302	C-11	Q1014	A-3
		Q1015	A-4
IC1001	B-6	Q1017	A-4
IC1014	C-7	Q1020	B-3
IC1016	C-7	Q1021	B-3
IC1017	C-7	Q1030	B-7
IC1018	C-7	Q1031	B-7
IC1019	C-7	Q1032	B-7
IC1106	A-10	Q1033	B-7
IC1108	B-10	Q1034	B-7
		Q1035	B-7
Q1001	A-3	Q1251	B-11
Q1002	A-3	Q1252	B-11
Q1003	B-4	Q1261	B-11
Q1004	B-4	Q1262	B-11
Q1005	B-4	Q1271	B-11
Q1006	C-4	Q1272	B-11
Q1007	C-4	Q1331	C-6
Q1008	C-4	Q1332	C-5
Q1009	B-4		

- **Semiconductor Location (Side B)**

Ref. No.	Location	Ref. No.	Location
D1303	C-3	IC1020	C-7
D1304	C-3	IC1101	B-8
D1305	C-3	IC1102	A-8
D1308	C-4	IC1103	A-7
D1309	C-4	IC1104	B-9
D1311	C-2	IC1105	A-9
D1312	C-2	IC1201	B-11
D1313	C-3	IC1301	A-3
		IC1302	B-3
IC1002	B-4		
IC1003	B-3	Q1016	A-4
IC1004	C-6	Q1018	A-5
IC1005	C-7	Q1019	B-3
IC1006	C-5	Q1022	A-6
IC1007	B-6	Q1023	C-6
IC1008	B-6	Q1024	A-5
IC1009	A-5	Q1025	C-5
IC1010	A-5	Q1026	C-5
IC1011	B-5	Q1027	B-7
IC1012	C-7	Q1028	B-7
IC1013	C-7	Q1029	B-7
IC1015	C-7	Q1036	B-7

4-13. PRINTED WIRING BOARD – MA-324 Board –

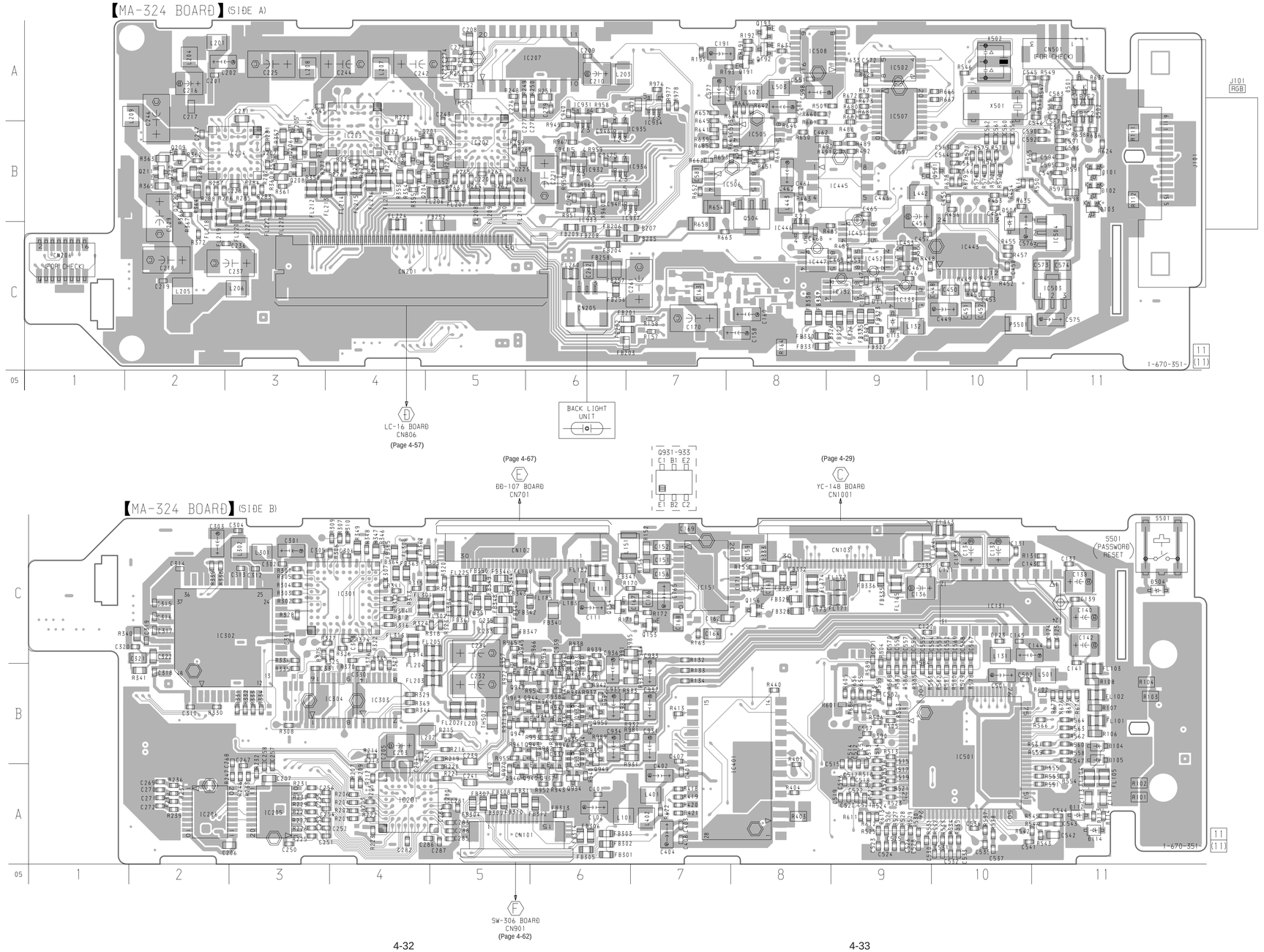
• See page 4-13 for Circuit Boards Location.

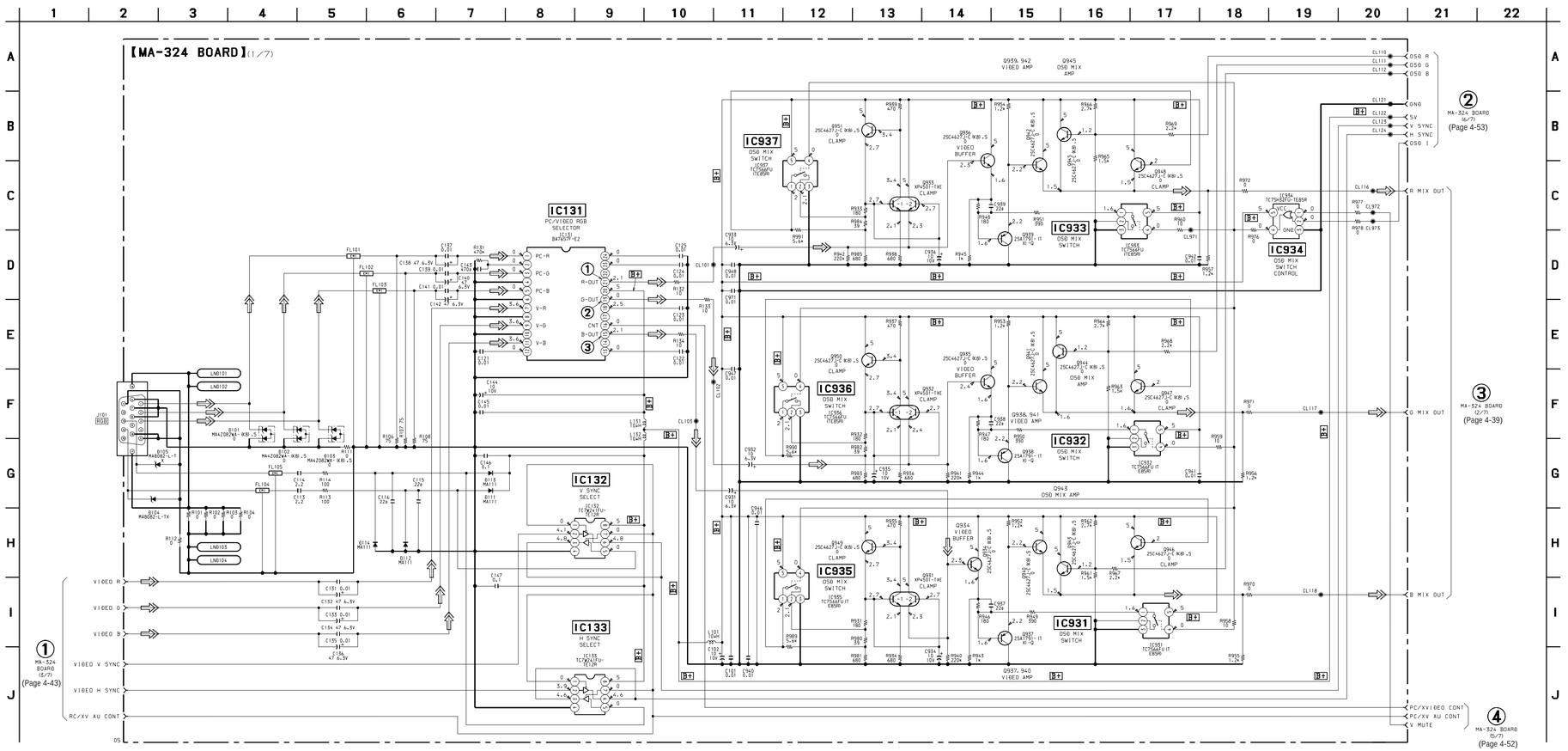
• **Semiconductor Location (Side A)**

Ref. No.	Location	Ref. No.	Location
D101	B-11	IC931	A-6
D102	B-11	IC932	B-6
D103	B-11	IC933	B-6
D111	C-9	IC934	A-7
D113	C-9	IC935	B-6
D501	A-11	IC936	B-6
D503	C-10	IC937	B-7
IC132	C-9	Q191	A-8
IC133	C-9	Q192	A-8
IC202	B-5	Q193	A-8
IC203	B-4	Q201	B-5
IC204	B-3	Q202	B-5
IC207	A-6	Q203	B-4
IC443	C-10	Q204	B-4
IC445	B-9	Q205	B-3
IC446	C-8	Q206	B-3
IC447	C-8	Q207	B-3
IC451	C-9	Q208	B-3
IC452	C-9	Q209	B-2
IC453	C-9	Q210	B-2
IC502	A-9	Q211	B-2
IC503	C-11	Q212	B-2
IC504	C-11	Q501	B-10
IC505	B-8	Q502	A-11
IC506	B-8	Q503	B-8
IC507	A-9	Q504	B-8
IC508	A-8		

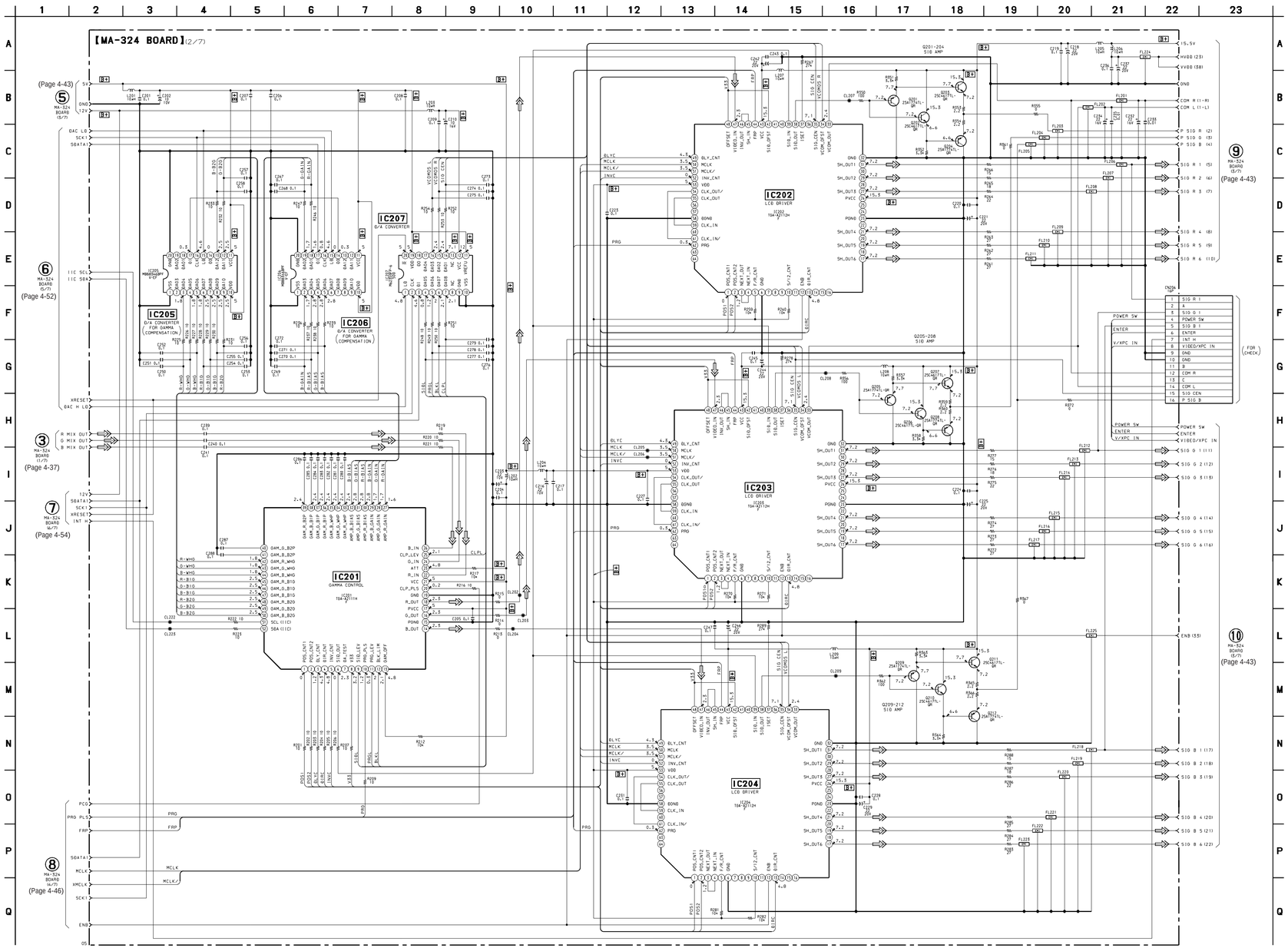
• **Semiconductor Location (Side B)**

Ref. No.	Location	Ref. No.	Location
D104	B-11	Q931	B-6
D105	B-11	Q932	B-6
D112	A-11	Q933	C-6
D114	A-11	Q934	A-6
D504	C-11	Q935	B-6
		Q936	B-6
IC131	C-10	Q937	A-6
IC151	C-7	Q938	B-6
IC201	A-4	Q939	B-6
IC205	A-3	Q940	A-6
IC206	A-2	Q941	B-6
IC301	C-4	Q942	B-6
IC302	C-2	Q943	B-6
IC303	B-4	Q944	B-6
IC304	B-4	Q945	C-5
IC305	B-3	Q946	A-5
IC401	B-8	Q947	B-5
IC501	B-10	Q948	B-5
		Q949	B-6
Q153	C-7	Q950	B-6
Q154	C-6	Q951	B-6
Q156	C-8		



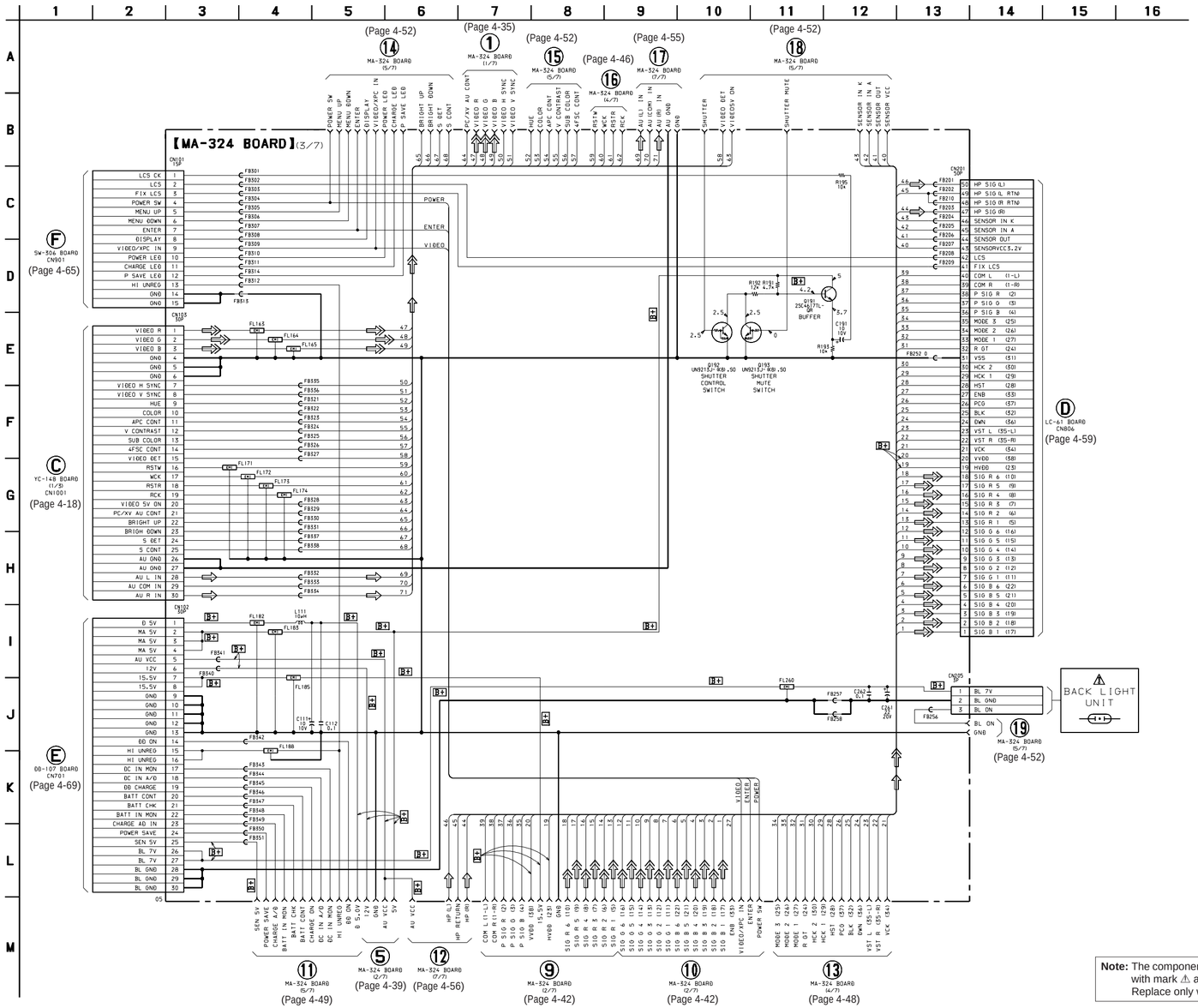

【MA-324 BOARD】(1/7)
IC131
PC/VIDEO RGB SELECTOR
IC132
V SYNC SELECT
IC133
H SYNC SELECT
IC937
OSD MIX SWITCH
IC936
OSD MIX SWITCH
IC935
OSD MIX SWITCH
IC933
OSD MIX SWITCH
IC932
OSD MIX SWITCH
IC931
OSD MIX SWITCH
IC934
OSD MIX SWITCH CONTROL
Q945
OSD MIX AMP
Q943
OSD MIX AMP
VIDEO R
VIDEO G
VIDEO B
VIDEO V SYNC
VIDEO H SYNC
RC/XV AU CONT
OSD R
OSD G
OSD B
GND
5V
V SYNC
H SYNC
OSD I
R MIX OUT
G MIX OUT
B MIX OUT
PC/XVIDEO CONT
PC/XV AU CONT
V MUTE
① MA-324 BOARD (5/7) (Page 4-43)
② MA-324 BOARD (6/7) (Page 4-53)
③ MA-324 BOARD (2/7) (Page 4-39)
④ MA-324 BOARD (5/7) (Page 4-52)

4-15. SCHEMATIC DIAGRAM – MA-324 Board (2/7) – • See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.



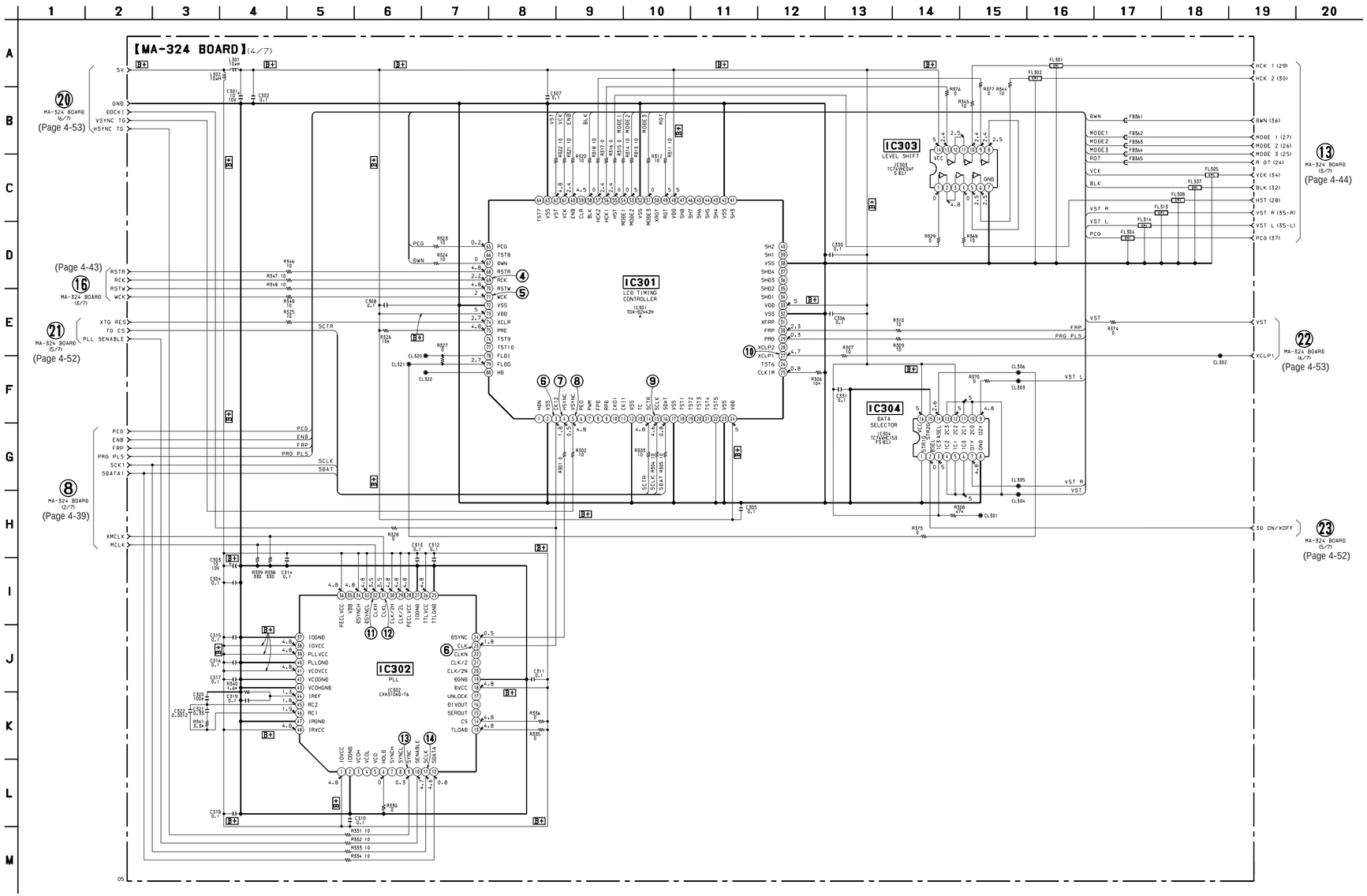
4-16. SCHEMATIC DIAGRAM – MA-324 Board (3/7) –

• See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.

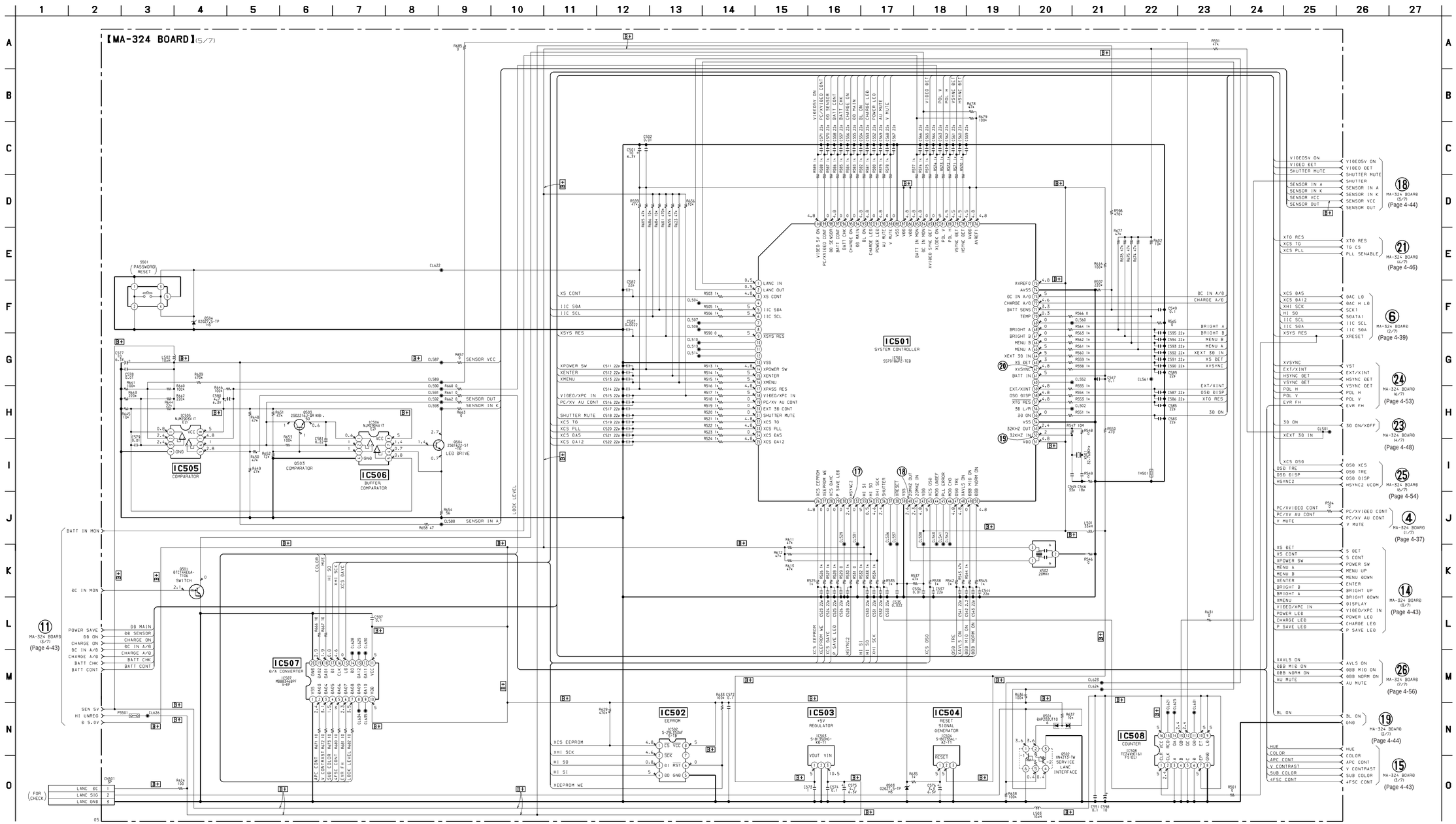


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

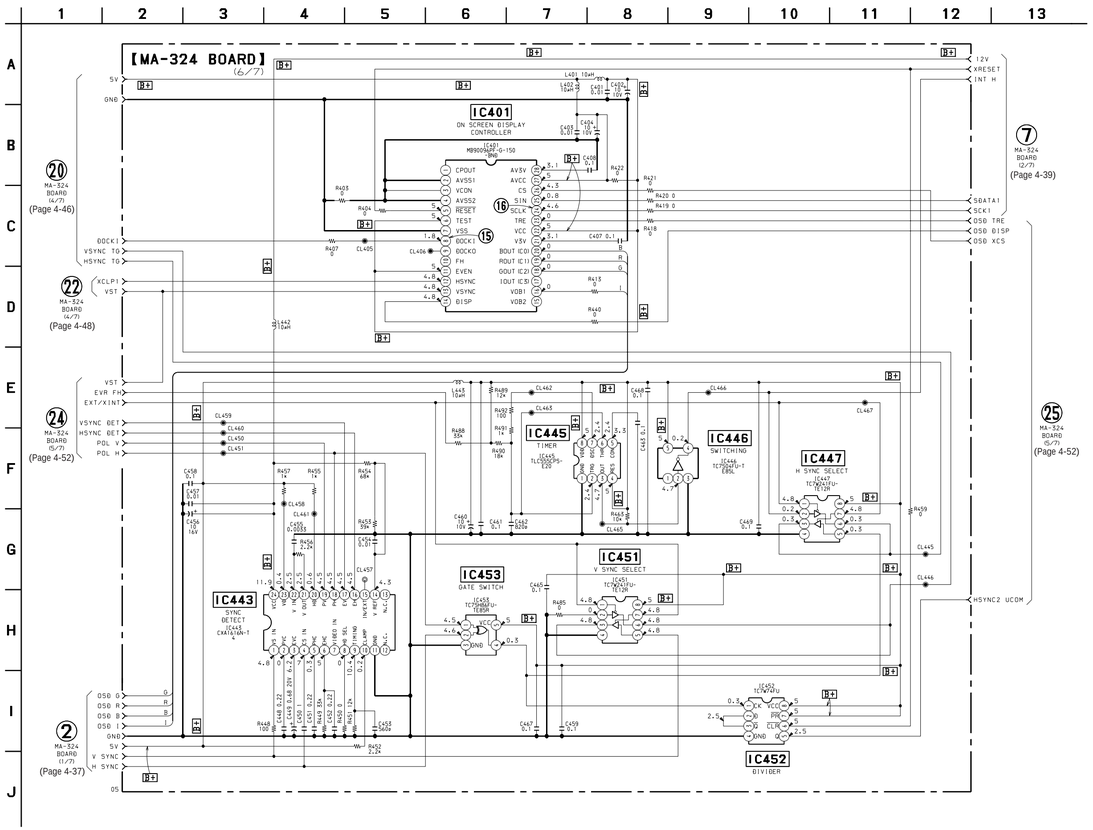
4-17. SCHEMATIC DIAGRAM – MA-324 Board (4/7) – • See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.



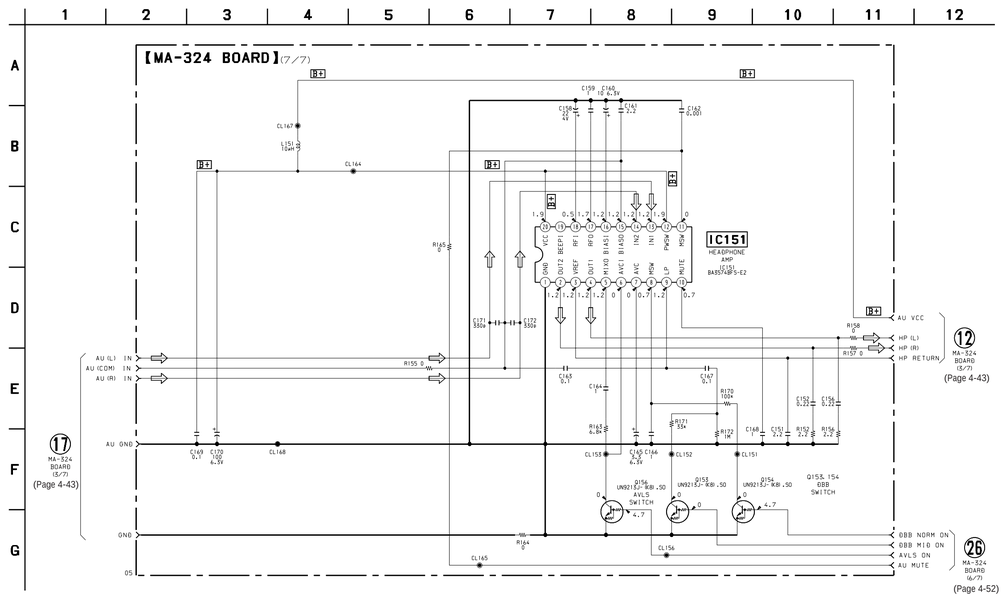
4-18. SCHEMATIC DIAGRAM – MA-324 Board (5/7) – • See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.



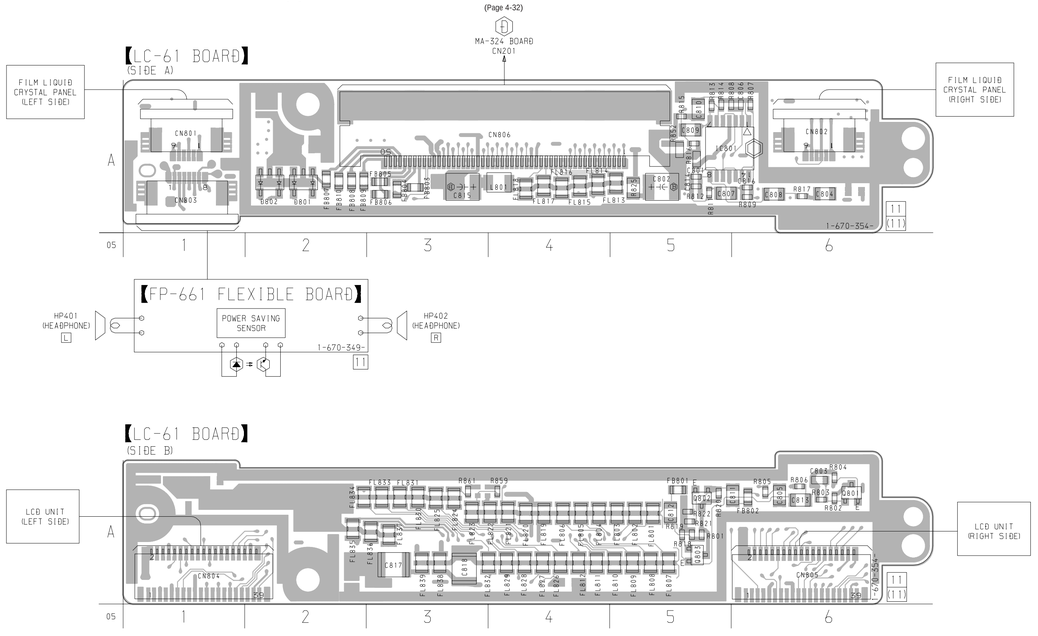
4-19. SCHEMATIC DIAGRAM – MA-324 Board (6/7) – • See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.



4-20. SCHEMATIC DIAGRAM – MA-324 Board (7/7) – • See page 4-74 for Waveforms. • See page 4-81 for IC Block Diagrams.



4-21. PRINTED WIRING BOARD – LC-61 Board – • See page 4-13 for Circuit Boards Location.



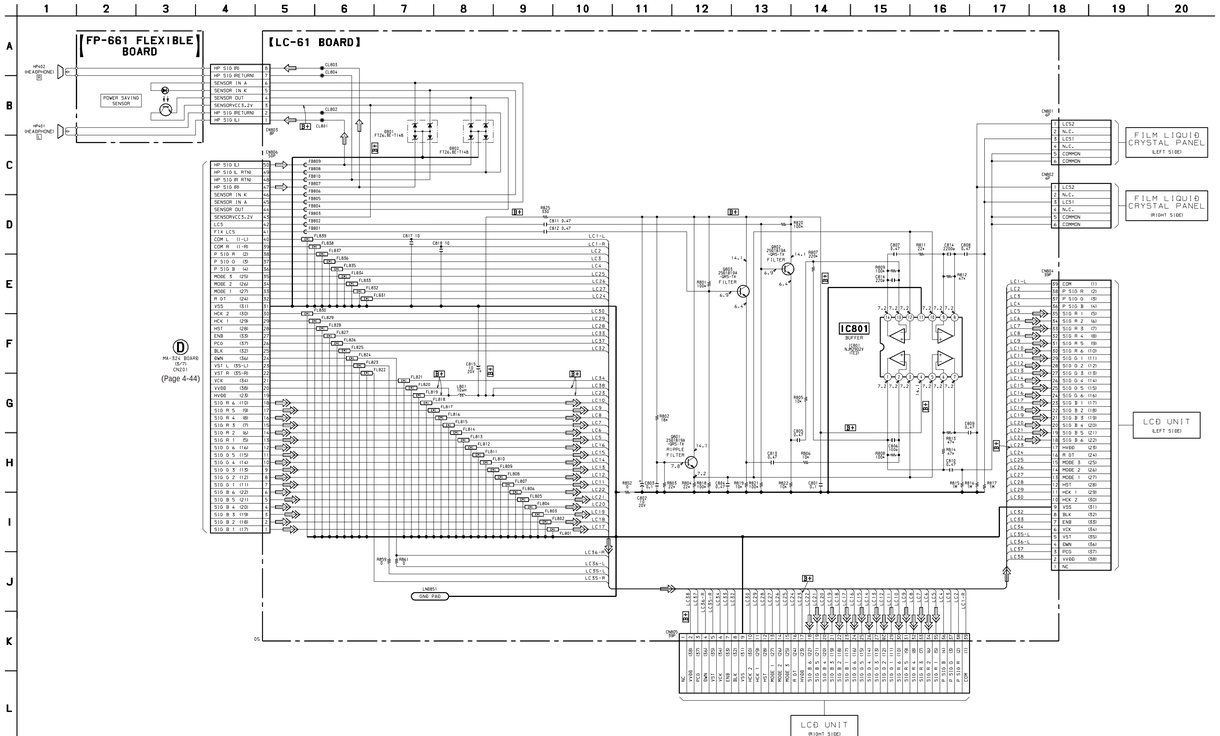
- **Semiconductor Location (Side A)**

Ref. No.	Location
D801	A-2
D802	A-2
IC801	A-5

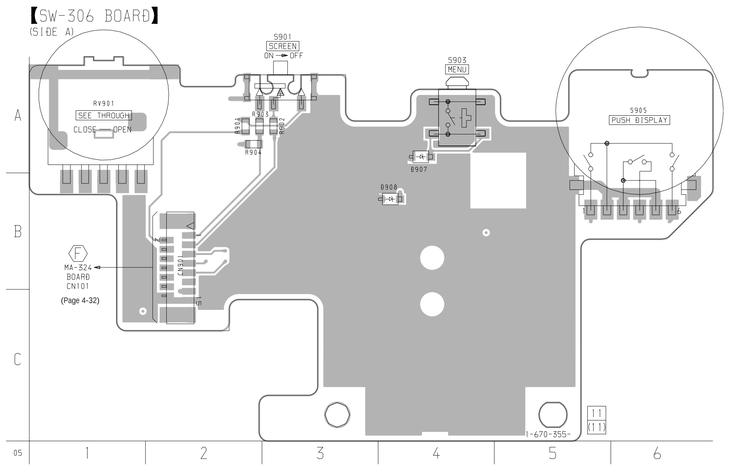
- **Semiconductor Location (Side B)**

Ref. No.	Location
Q801	A-6
Q802	A-5
Q803	A-5

4-22. SCHEMATIC DIAGRAM – LC-61 Board –

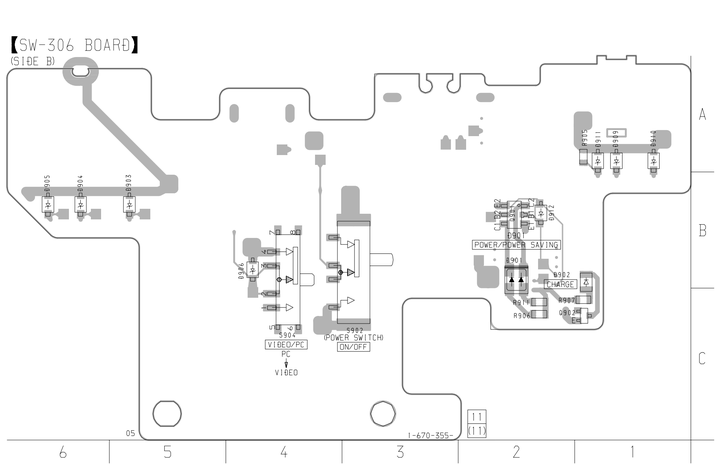


4-23. PRINTED WIRING BOARD – SW-306 Board – • See page 4-13 for Circuit Boards Location.



- **Semiconductor Location (Side A)**

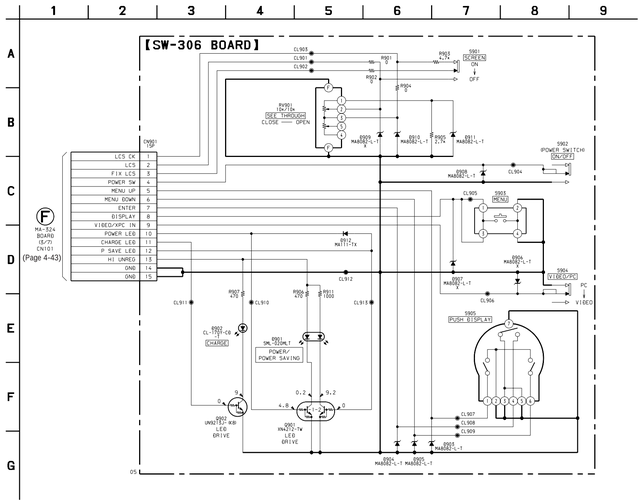
Ref. No.	Location
D907	A-4
D908	B-4
D912	XX-XX



- **Semiconductor Location (Side B)**

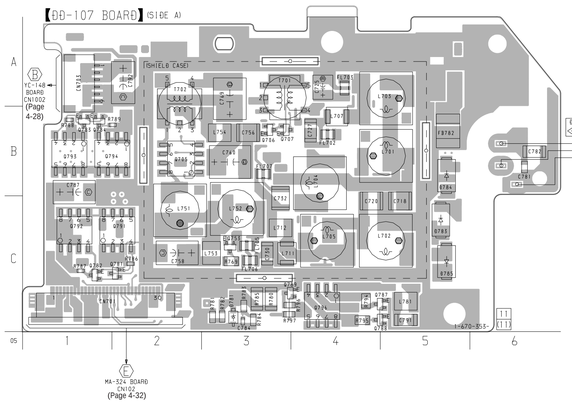
Ref. No.	Location
D901	B-2
D902	B-1
D903	B-5
D904	B-6
D905	B-6
D906	B-4
D909	A-1
D910	A-1
D911	A-1
D912	B-2
Q901	B-2
Q902	C-1

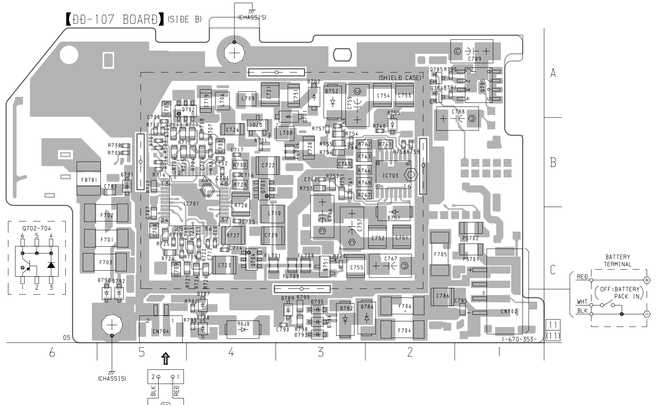
4-24. SCHEMATIC DIAGRAM – SW-306 Board –



4-25. PRINTED WIRING BOARD – DD-107 Board –

• See page 4-13 for Circuit Boards Location.





• **Semiconductor Location (Side A)**

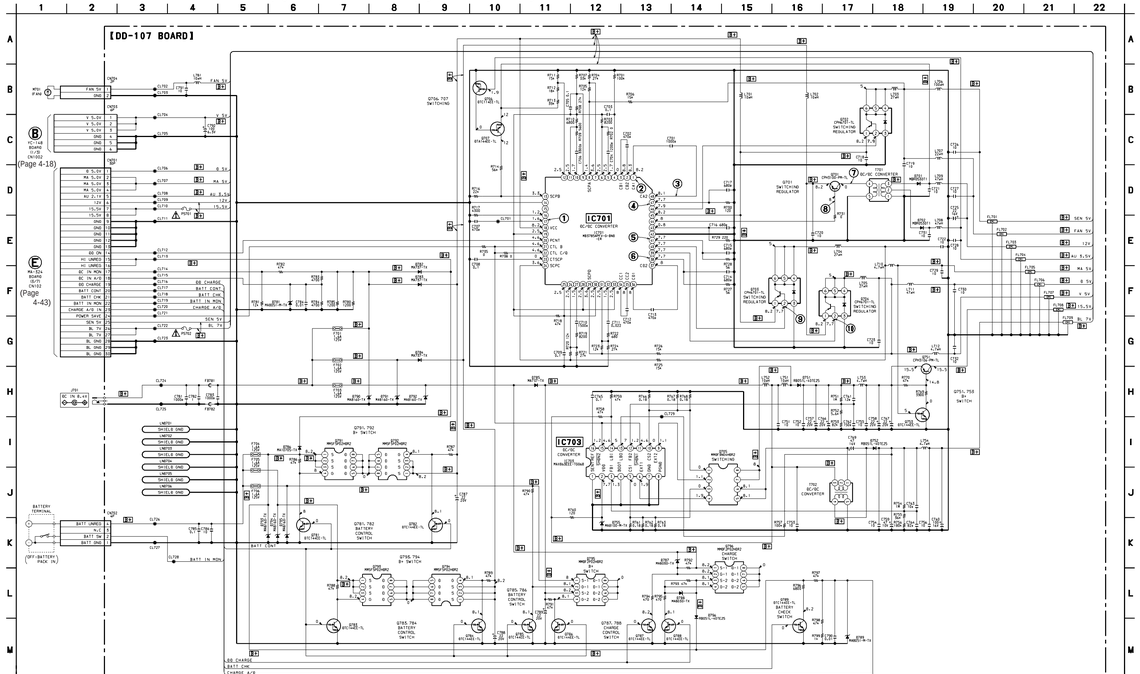
Ref. No.	Location	Ref. No.	Location
D781	C-3	Q783	B-1
D783	C-5	Q784	B-1
D784	B-5	Q787	C-5
D785	C-5	Q788	C-5
		Q789	C-3
Q705	B-2	Q791	C-2
Q706	B-3	Q792	C-1
Q707	B-3	Q793	B-1
Q753	C-3	Q794	B-2
Q781	C-2	Q796	C-4
Q782	C-1		

• **Semiconductor Location (Side B)**

Ref. No.	Location	Ref. No.	Location
D701	A-3	D795	C-3
D702	A-3	D796	C-4
D751	C-2		
D752	A-3	IC701	B-4
D755	B-2	IC703	B-2
D782	C-3		
D786	C-2	Q701	B-4
D787	C-4	Q702	A-5
D788	C-4	Q703	B-4
D789	C-3	Q704	C-4
D790	C-5	Q751	C-3
D791	B-5	Q785	A-2
D792	C-5	Q786	A-2
D793	C-3	Q795	A-1
D794	C-3		

4-26. SCHEMATIC DIAGRAM – DD-107 Board –

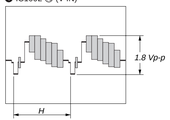
• See page 4-75 for Waveforms. • See page 4-87 for IC Block Diagrams.



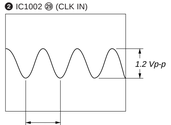
• Waveforms (Video Mode)

– YC-148 Board –

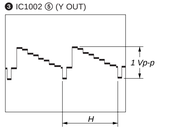
❶ IC1002 ㉙ (V IN)



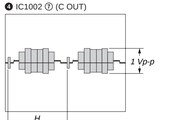
❷ IC1002 ㉘ (CLK IN)



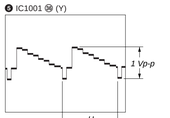
❸ IC1002 ⑥ (Y OUT)



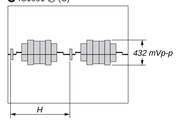
❹ IC1002 ⑦ (C OUT)



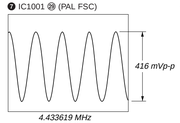
❺ IC1002 ㉖ (Y)



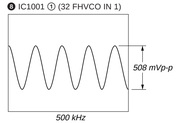
❻ IC1001 ㉔ (C)



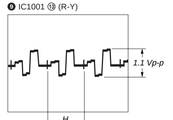
❼ IC1001 ㉘ (PAL FSC)



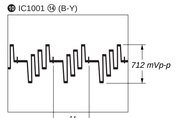
❽ IC1001 ① (32 FHVCO IN 1)



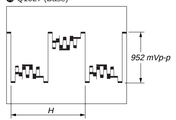
❾ IC1001 ⑲ (R-Y)



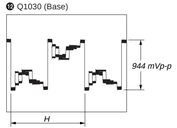
❿ IC1001 ⑭ (B-Y)



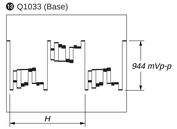
⓫ Q1027 (Base)



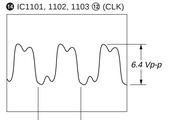
⓬ Q1030 (Base)



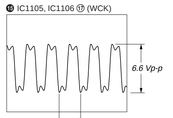
⓭ Q1033 (Base)



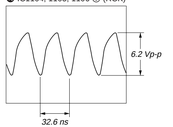
⓮ IC1101, 1102, 1103 ⑬ (CLK)



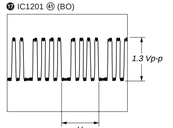
⓯ IC1105, IC1106 ㉗ (WCK)



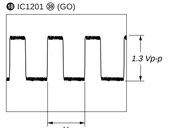
⓰ IC1104, 1105, 1106 ㉖ (RCK)



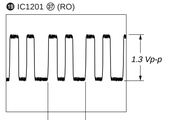
⓱ IC1201 ㉑ (BO)



⓲ IC1201 ㉘ (GO)

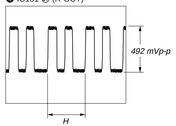


⓳ IC1201 ㉕ (RO)

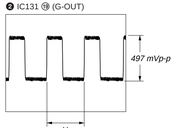


– MA-324 Board –

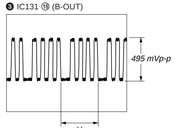
❶ IC131 ㉕ (R-OUT)



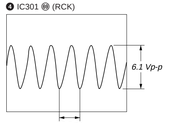
❷ IC131 ⑨ (G-OUT)



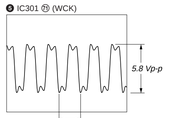
❸ IC131 ⑤ (B-OUT)



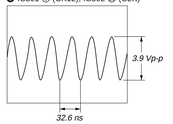
❹ IC301 ㉘ (RCK)



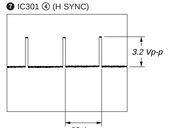
❺ IC301 ㉖ (WCK)



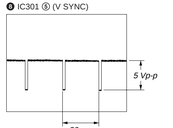
❻ IC301 ③ (CK12), IC302 ㉙ (CLK)



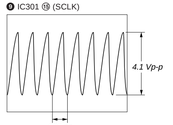
❼ IC301 ④ (H SYNC)



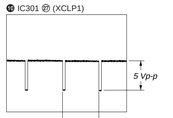
❽ IC301 ⑧ (V SYNC)



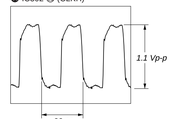
❾ IC301 ⑱ (SCLK)



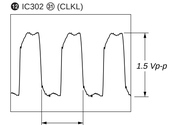
❿ IC301 ㉗ (XCLP1)



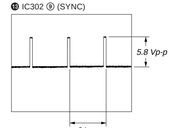
⓫ IC302 ㉘ (CLKH)



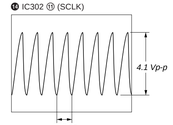
⓬ IC302 ㉕ (CLKL)



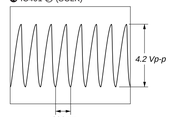
⓭ IC302 ⑨ (SYNC)



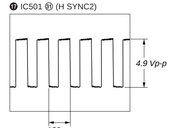
⓮ IC302 ⑬ (SCLK)



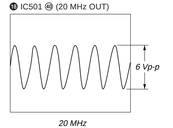
⓯ IC401 ㉔ (SCLK)



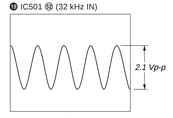
⓰ IC501 ⑰ (H SYNC2)



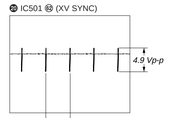
⓱ IC501 ㉒ (20 MHz OUT)



⓲ IC501 ㉓ (32 kHz IN)

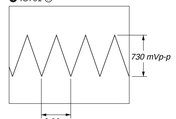


⓳ IC501 ㉖ (XV SYNC)

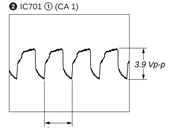


– DD-107 Board –

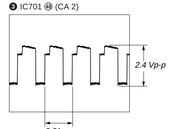
❶ IC701 ⑰



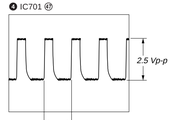
❷ IC701 ① (CA 1)



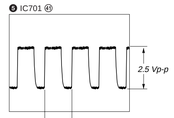
❸ IC701 ㉘ (CA 2)



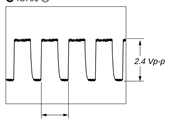
❹ IC701 ㉕



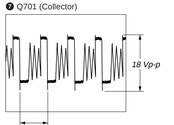
❺ IC701 ㉔



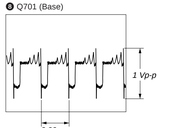
❻ IC701 ㉖



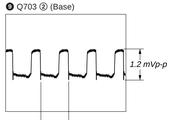
❼ Q701 (Collector)



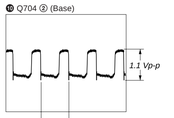
❽ Q701 (Base)



❾ Q703 ② (Base)



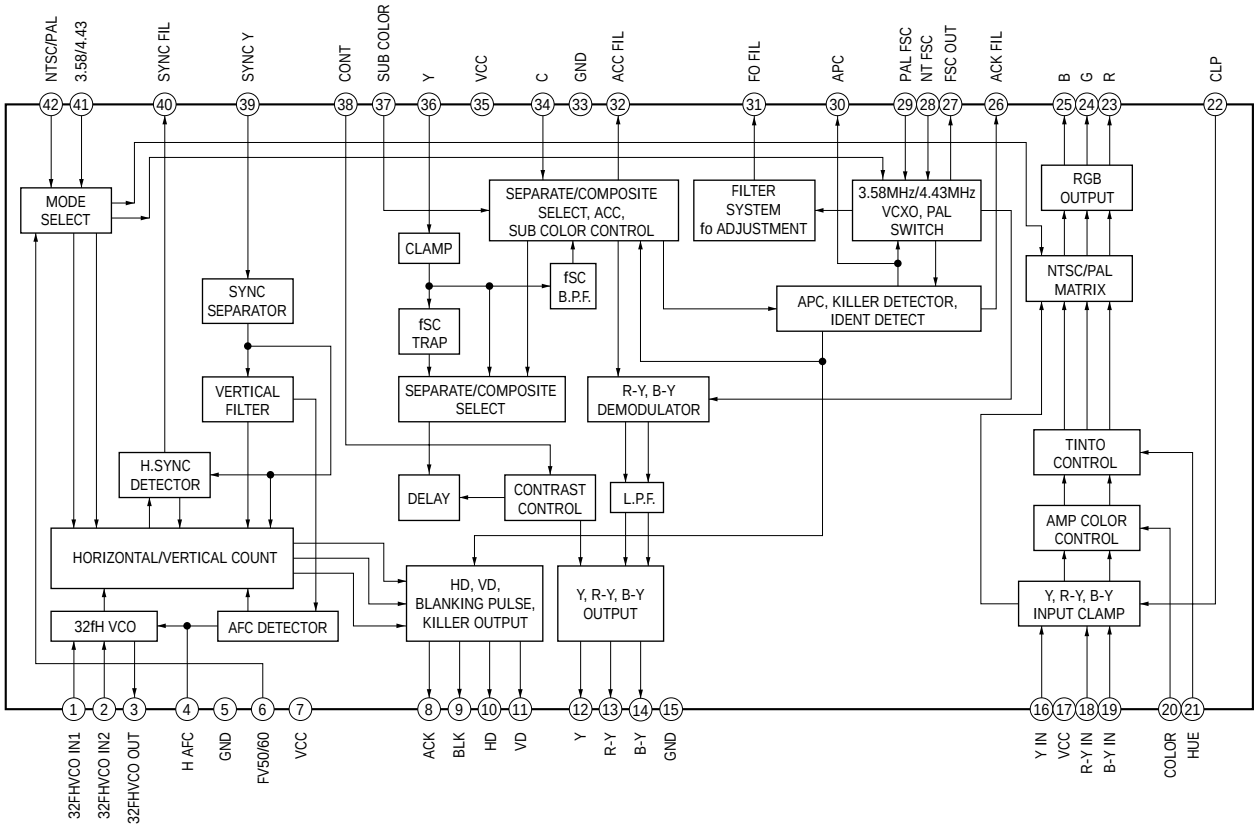
❿ Q704 ② (Base)



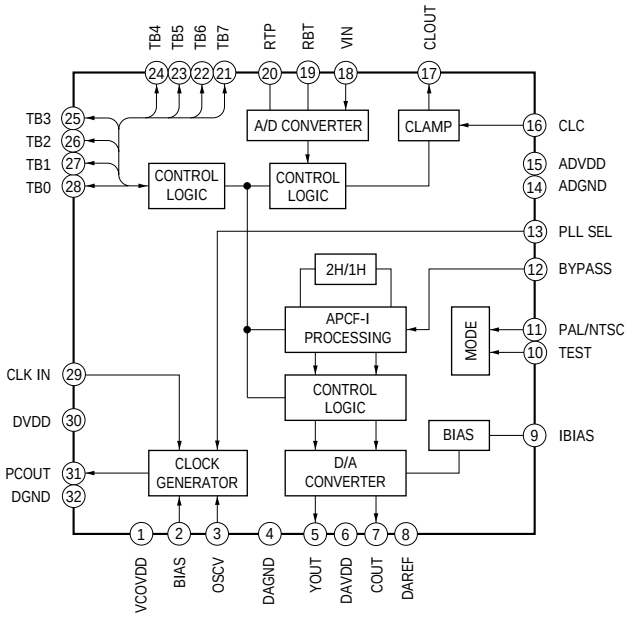
Note: Waveforms are dc with respect to ground in color-bar signal input.

• **IC Block Diagrams**
– YC-148 Board –

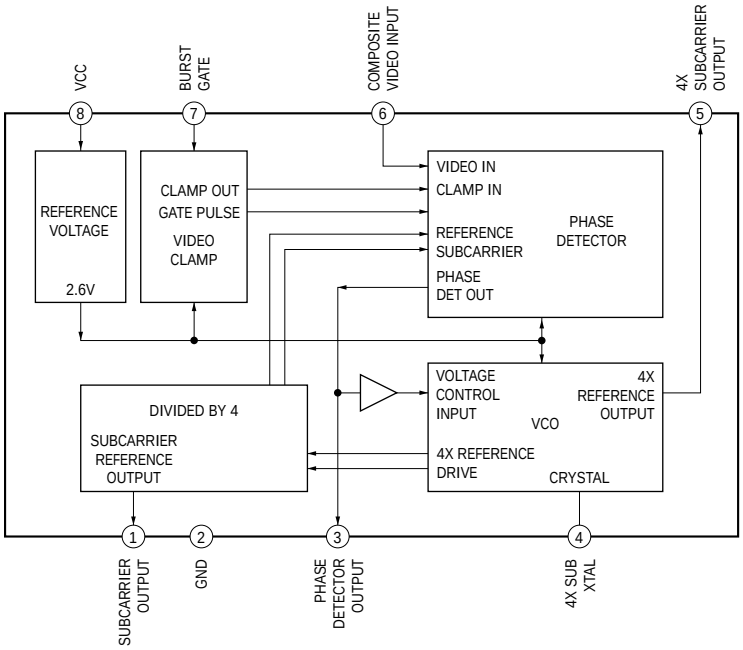
IC1001 uPC1830GT-E2



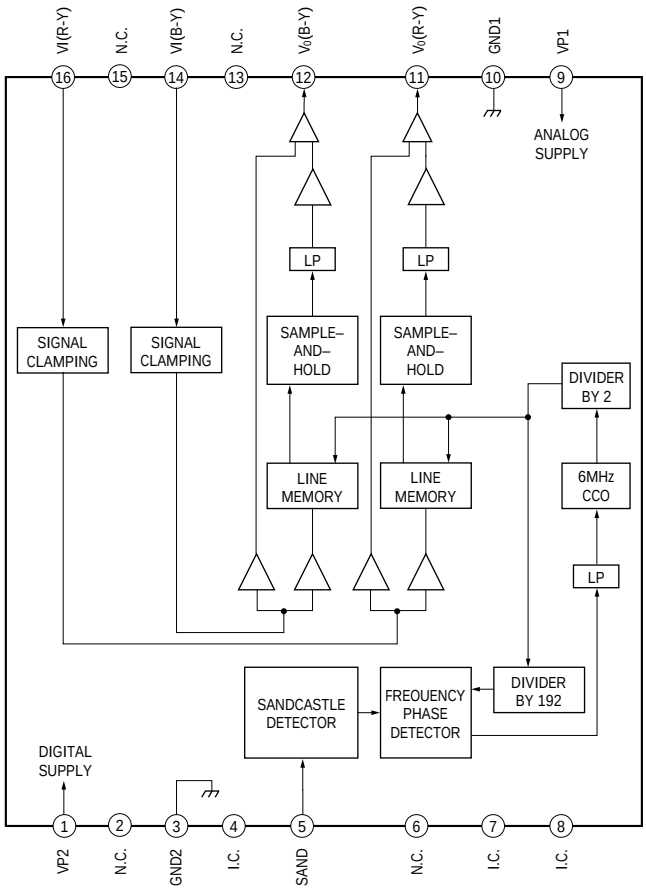
IC1002 MC141628FUEB



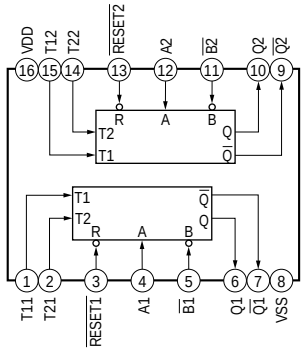
IC1003 MC44144DR2



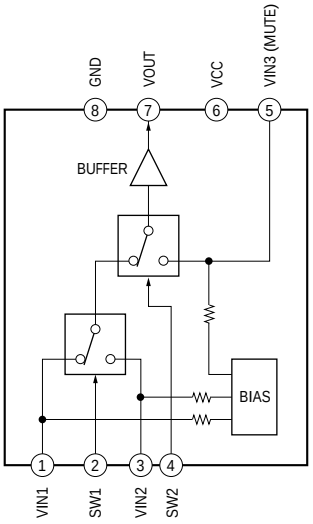
IC1004 TDA4665T/V5-118



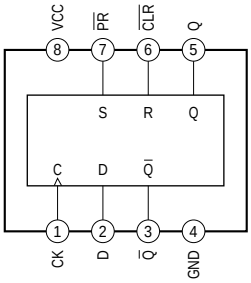
IC1005 TC74HC4538AFT (EL)



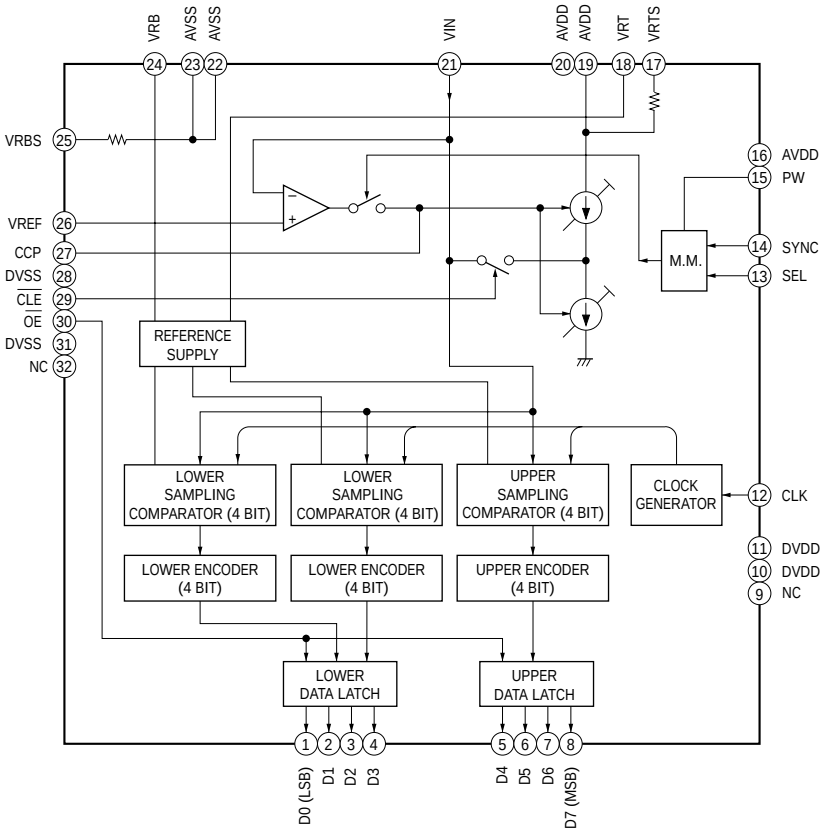
IC1009, 1010 NJM2534V (TE2)



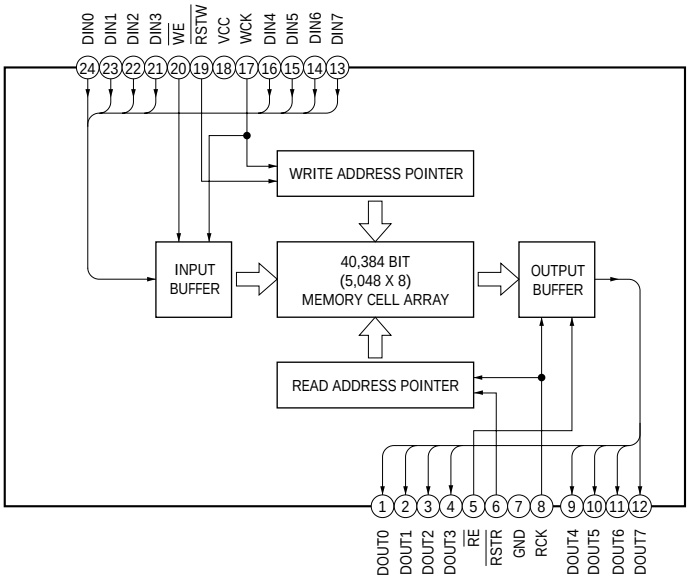
IC1012, 1016 TC7W74FU (TE12R)



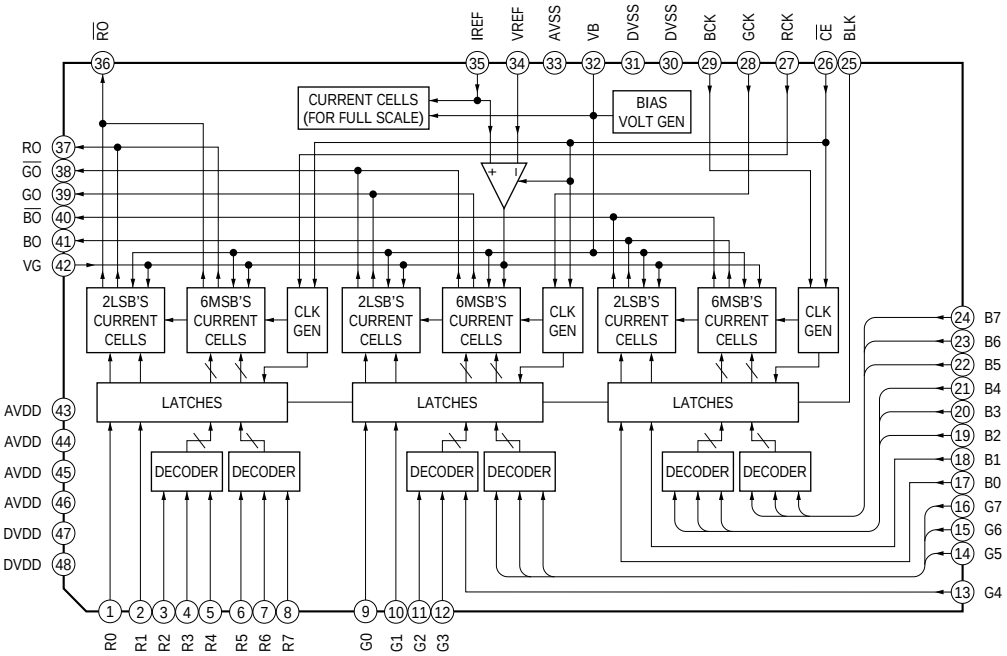
IC1001-1103 CXD1176Q-T4



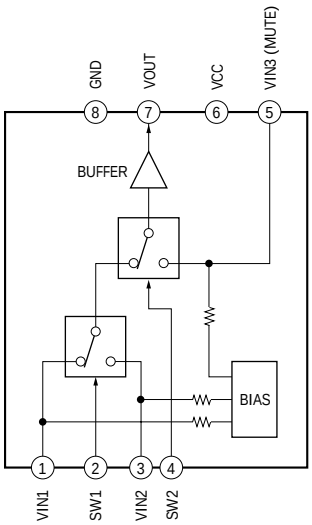
IC1104-1106 uPD485505G-35-E2



IC1201 CXD1178Q-T6

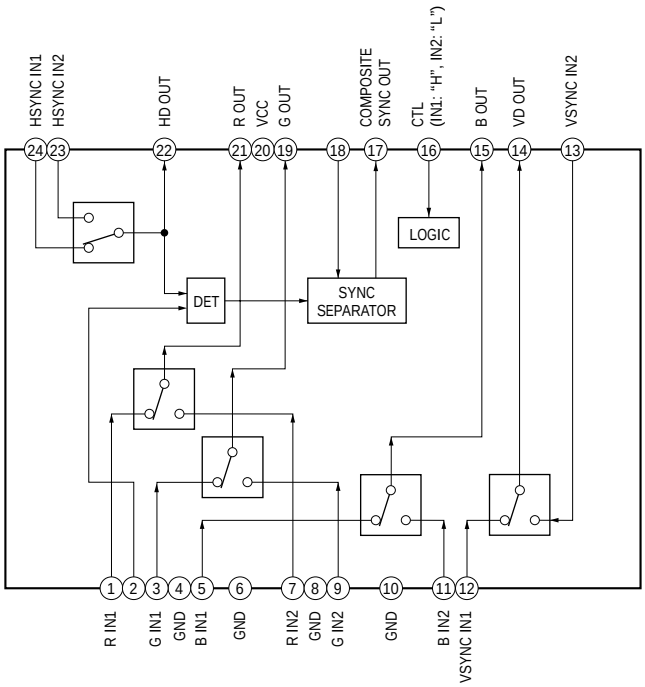


IC1301, 1302 NJM2521M-TE1

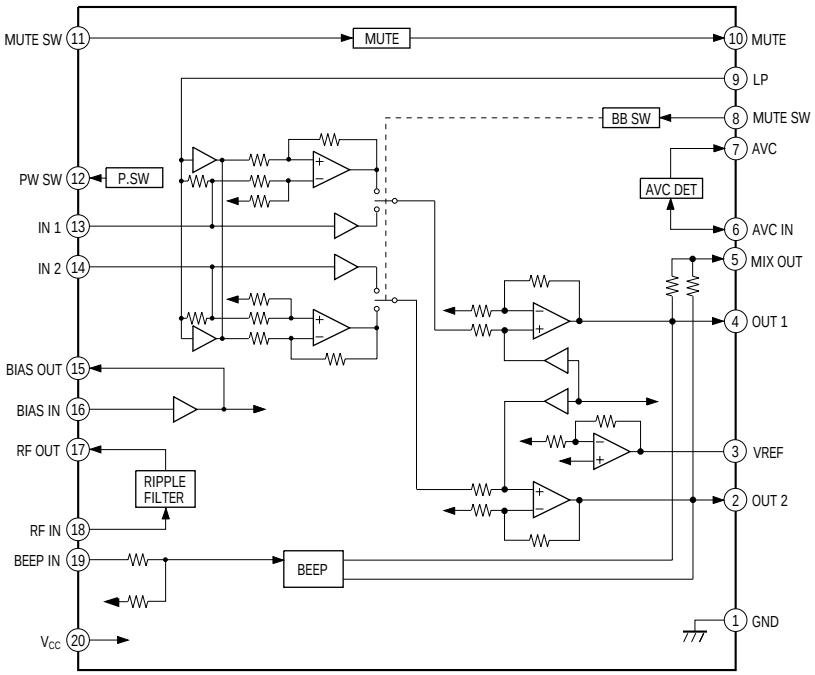


– MA-324 Board –

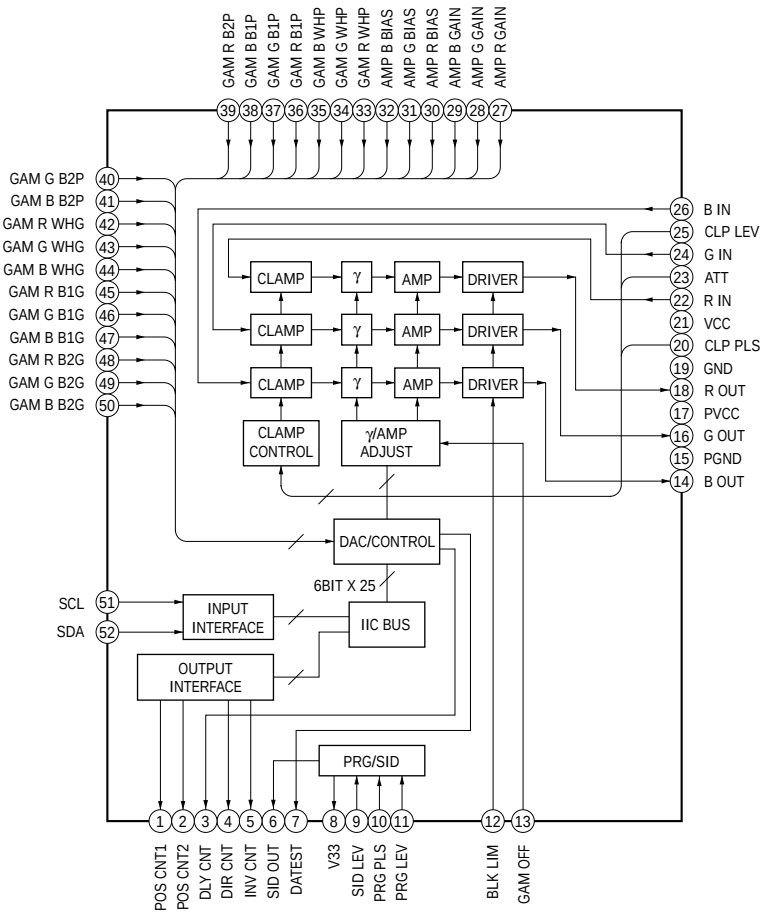
IC131 BA7657F-E2



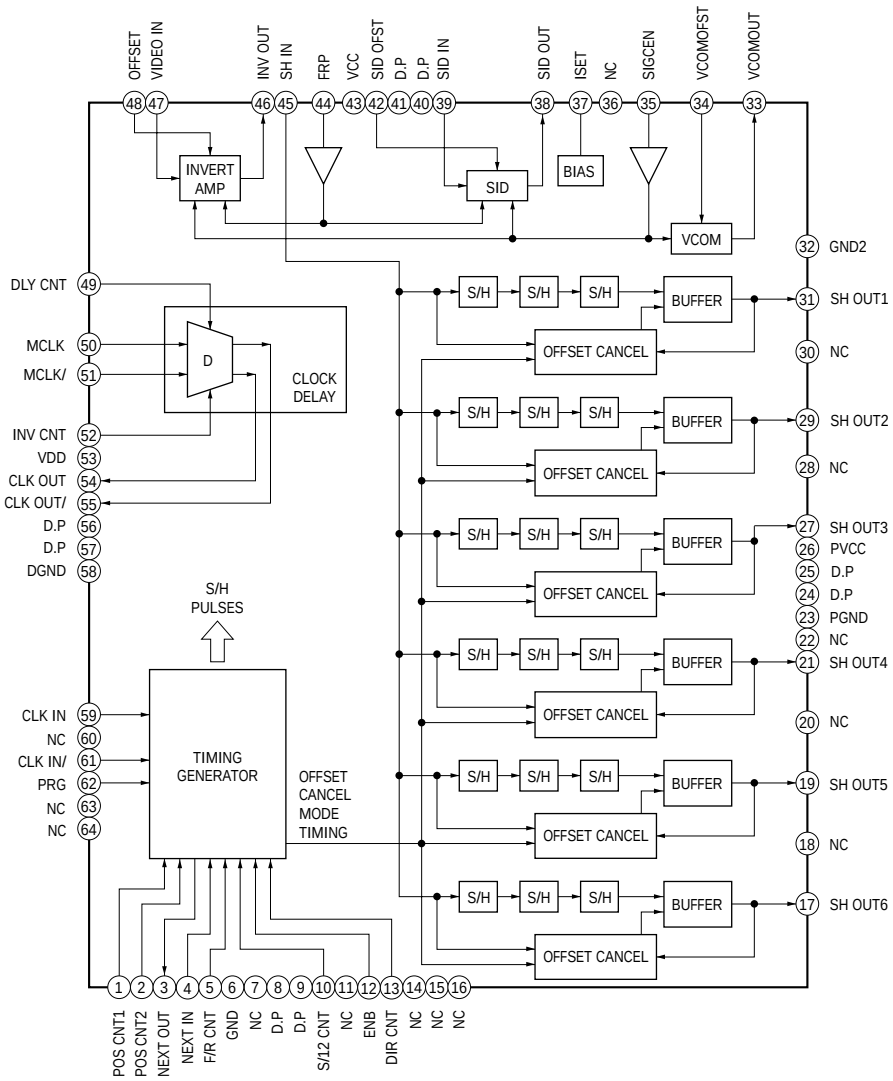
IC151 BA3574BFS-E2



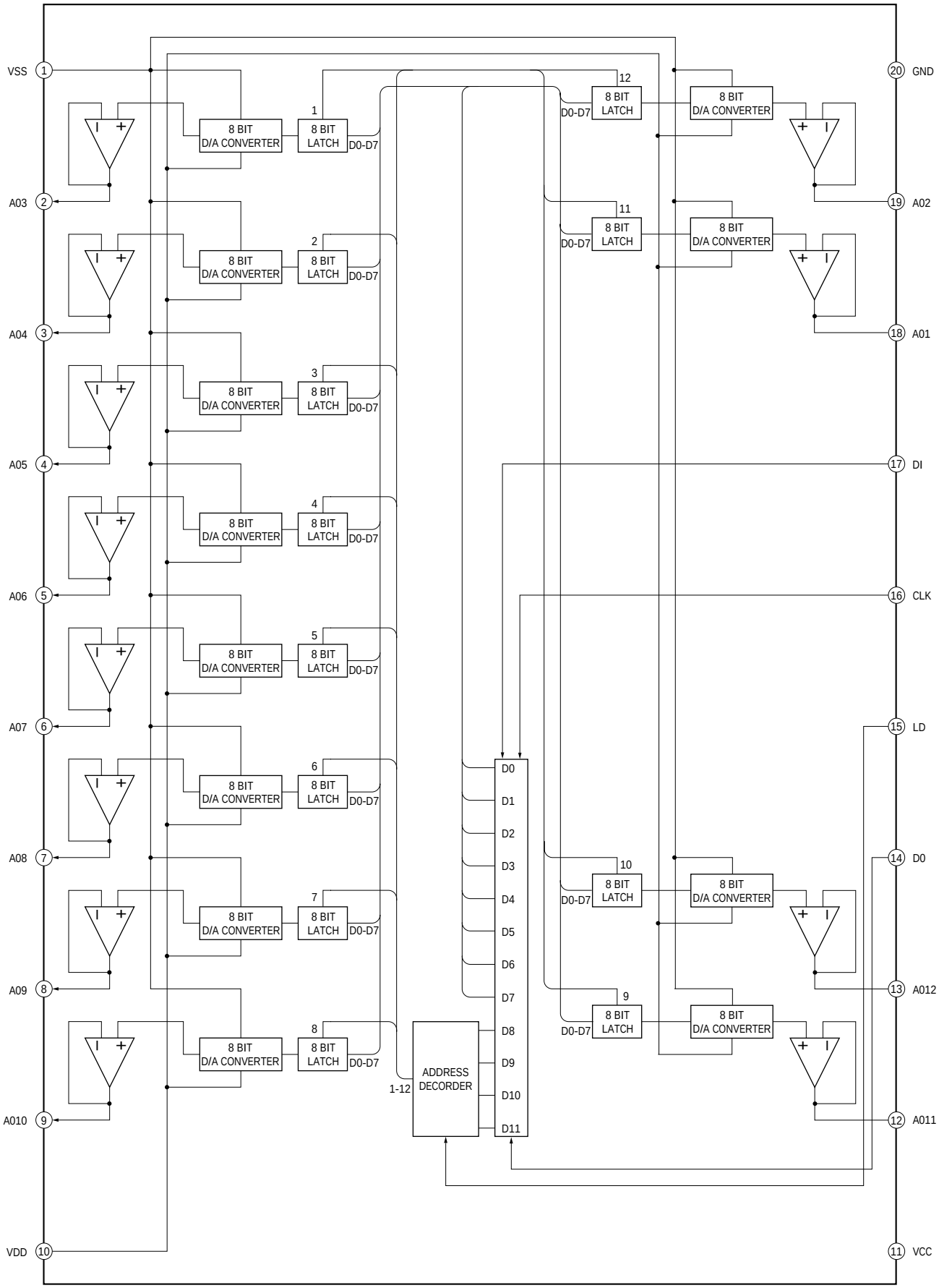
IC201 TGA-A2111HF



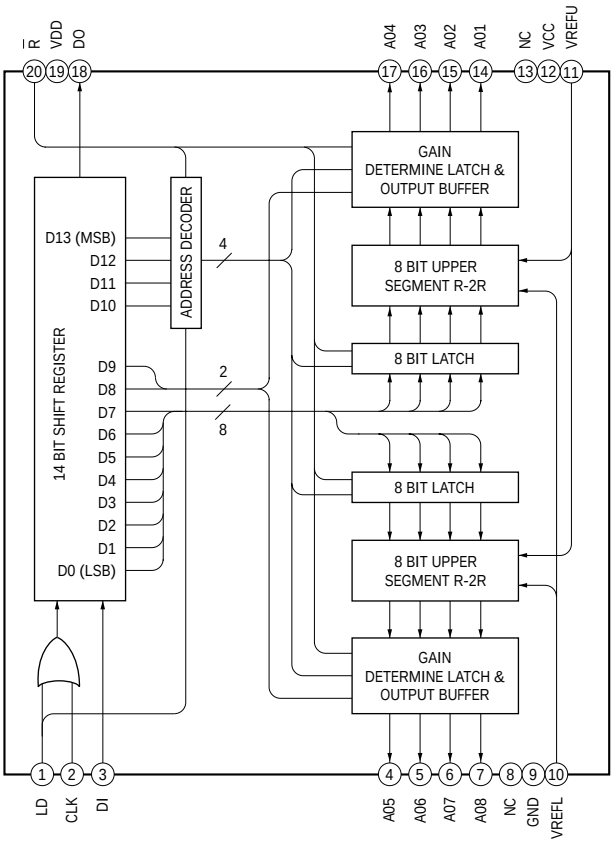
IC202-204 TGA-A2112HF



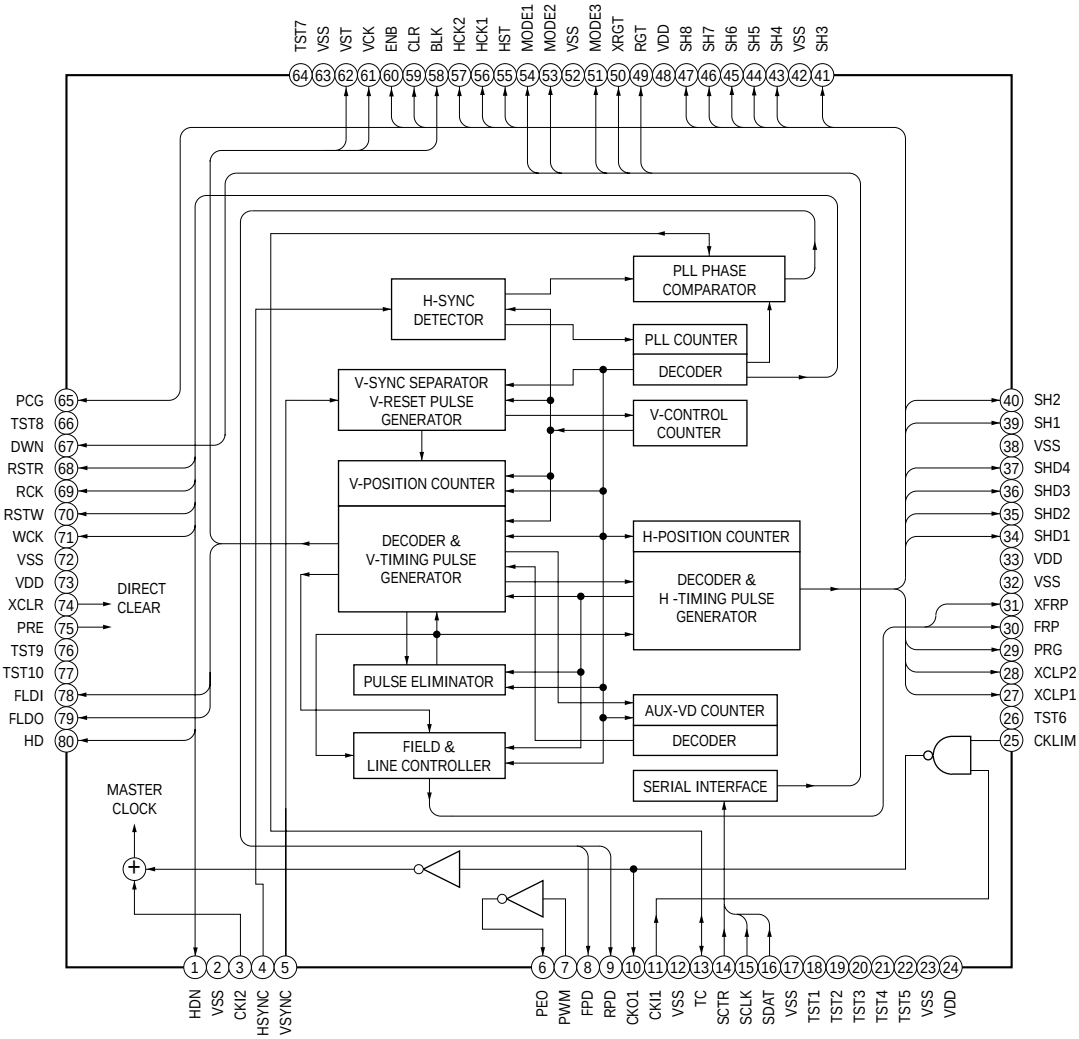
IC205, 206, 507 MB88346BPFV-EF



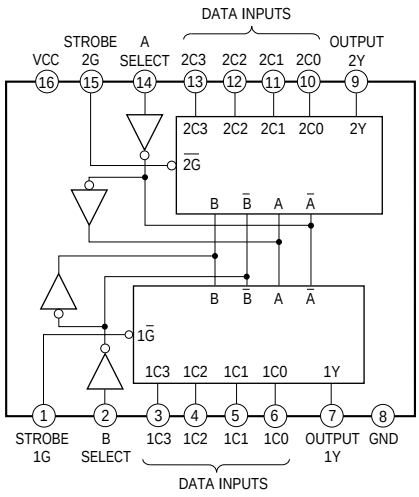
IC207 M62359FP-650D



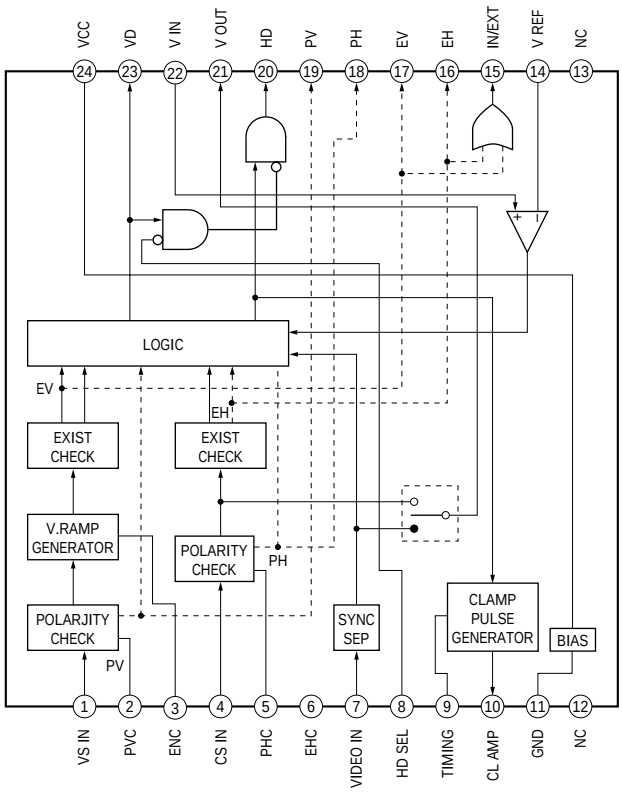
IC301 TGA-D2442HA



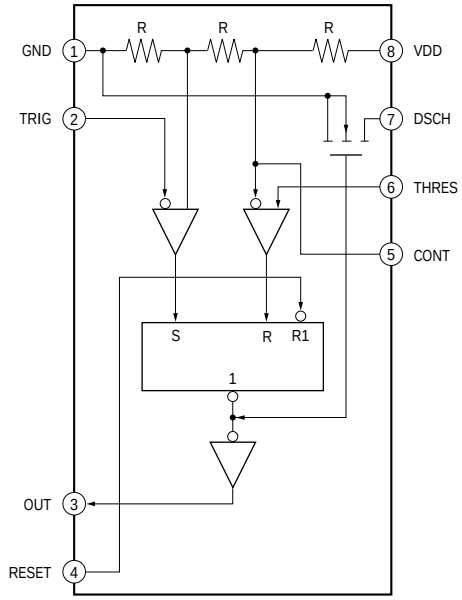
IC304 TC74VHC153FS (EL)



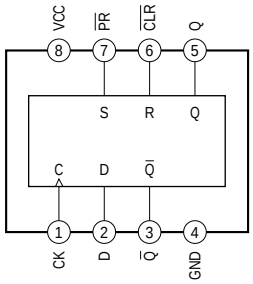
IC443 CXA1616N-T4



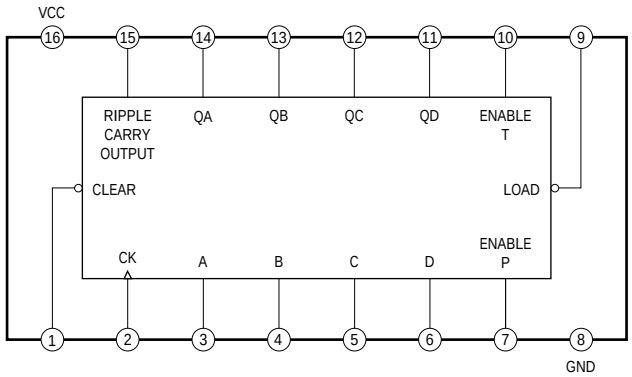
IC445 TLC555CPS-E20



IC452 TC7W74FU (TE12R)

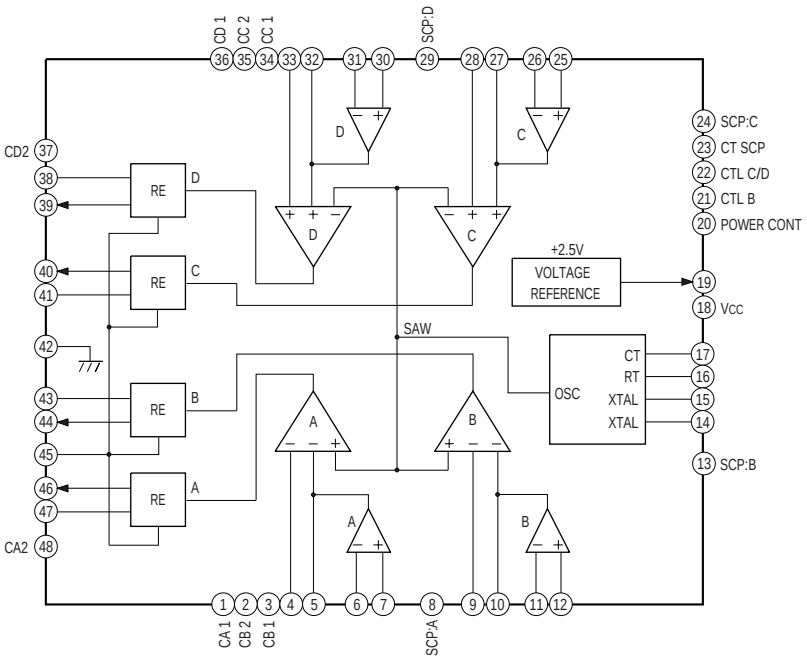


IC508 TC74VHC161FS (EL)

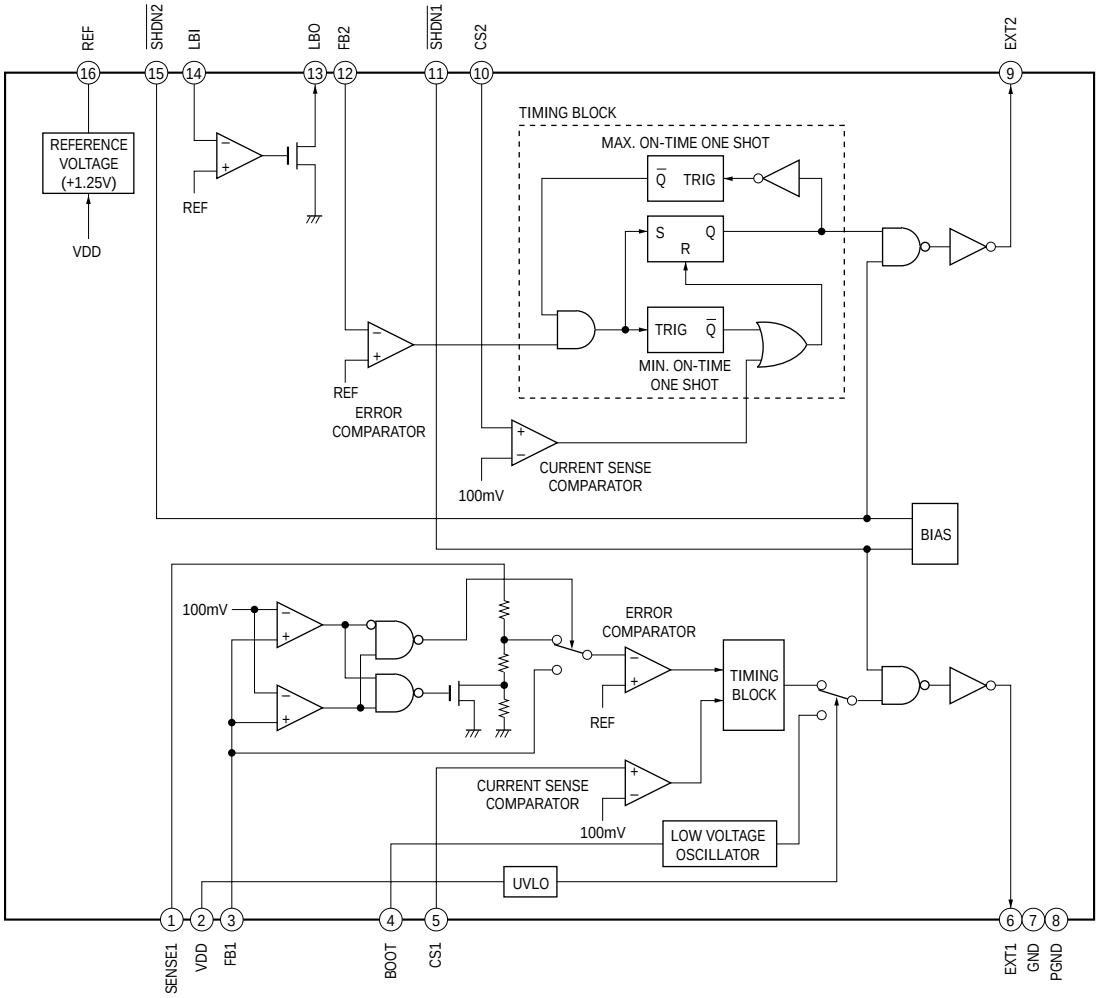


– DD-107 Board –

IC701 MB3785APFV-G-BND-ER



IC703 MAX863EEE-TG068



4-27. IC PIN FUNCTION DESCRIPTION

• YC-148 BOARD IC1002 MC141628FUEB (Y/C SEPARATOR A/D, D/A CONVERTER)

Pin No.	Pin Name	I/O	Function
1	VCOVDD	—	Power supply terminal (+5V) (for VCO)
2	BIAS	I	Bias current input terminal (for VCO)
3	OSCV	I	VCO control voltage input terminal Signal input from the PCOUT (pin ㉛)
4	DAGND	—	Ground terminal (for D/A converter)
5	Y OUT	O	Brightness signal output terminal
6	DAVCC	—	Power supply terminal (+5V) (for D/A converter)
7	C OUT	O	Chroma signal output terminal
8	DAREF	—	Reference voltage terminal (for D/A converter)
9	IBIAS	—	Current control terminal of bias circuit for D/A, A/D converters
10	TEST	I	Setting terminal for the test mode (Normally: fixed at “L”)
11	$\overline{\text{PAL}}$/NTSC	I	Setting terminal for the video mode (NTSC/PAL) “L”: PAL mode, “H”: NTSC mode (fixed at “L” in this set)
12	BYPASS	I	Setting terminal for the bypass selection (Normally: fixed at “L”)
13	PLLSEL	I	For setting whether clock is entered by color subcarrier input (built-in PLL operation) or by external clock input “L”: built-in PLL operation (fixed at “H” in this set)
14	ADGND	—	Ground terminal (for A/D converter)
15	ADVDD	—	Power supply terminal (+5V) (for A/D converter)
16	CLC	I	For setting time constant for internal clamp circuit (Normally: fixed at “H”)
17	CLOUT	O	Clamp voltage output terminal
18	V IN	I	Video signal input to the internal A/D converter
19	RBT	—	Bottom reference voltage for A/D converter Internal bottom reference voltage is supplied
20	RTP	—	Top reference voltage for A/D converter Internal top reference voltage is supplied
21 to 28	TB7 to TB0	I/O	In/out terminal for the digital interface Not used (fixed at “L”)
29	CLK IN	I	Color subcarrier input from the MC44144DR2 (IC1003)
30	DVDD	—	Power supply terminal (+5V) (digital system)
31	PCOUT	O	Phase comparator output terminal
32	DGND	—	Ground terminal (digital system)

• **MA-324 BOARD IC301 TGA-D2442HA (LCD TIMING GENERATOR)**

Pin No.	Pin Name	I/O	Function
1	HDN	O	Pulse output for the phase comparator Not used (open)
2	VSS	—	Ground terminal
3	CKI2	I	Clock signal input from the PLL (IC302) (SVGA, VGA)
4	HSYNC	I	Horizontal sync signal input from the PLL (IC302)
5	VSYNC	I	Vertical sync signal input terminal
6	PEO	O	Integrator output terminal for the loop filter (AV) Not used (open)
7	PWM	I	Integrator input terminal for the loop filter (AV) Not used (open)
8	FPD	O	Phase comparator output terminal (AV) Not used (open)
9	RPD	O	Phase comparator output terminal (AV) Not used (open)
10	CKO1	O	Clock signal output terminal Not used (open)
11	CKI1	I	Clock signal input terminal Not used (open)
12	VSS	—	Ground terminal
13	TC	I/O	I/O terminal for the FPD output pulse width adjustment
14	SCTR	I	Chip select signal input from the system controller (IC501)
15	SCLK	I	Serial data transfer clock signal input from the system controller (IC501)
16	SDAT	I	Serial data input from the system controller (IC501)
17	VSS	—	Ground terminal
18 to 21	TST1 to TST4	I	Input terminal for the test Not used (open)
22	TST5	I	Input terminal for the test Not used (fixed at “L”)
23	VSS	—	Ground terminal
24	VDD	—	Power supply terminal (+5V)
25	CKLIM	I	Input terminal for the CKI1 (pin ⑪) input control “L”: CKI1 input disabled, “H”: CKI1 input enabled Fixed at “L” in this set
26	TST6	I	Input terminal for the test Not used (open)
27	XCLP1	O	Pulse 1 output for the pedestal clamp (negative polarity) In this set, horizontal sync signal is output for the on screen display controller (IC401)
28	XCLP2	O	Pulse 2 output for the pedestal clamp (negative polarity) Not used (open)
29	PRG	O	Pulse output for precharge signal to gamma control IC (IC201) and LCD drive IC (IC202 to 204) (positive polarity)
30	FRP	O	AC drive inversion timing output to the LCD drive IC (IC202 to 204)
31	XFRP	O	AC drive inversion timing output terminal (reverse polarity of the FRP ㉚ pin) Not used (open)
32	VSS	—	Ground terminal
33	VDD	—	Power supply terminal (+5V)
34 to 37	SHD1 to SHD4	O	Sample hold pulse (1 to 4) output terminal (for driver/positive polarity) Not used (open)
38	VSS	—	Ground terminal
39 to 41	SH1 to SH3	O	Sample hold pulse (1 to 3) output terminal (for high voltage-proof SH/positive polarity) Not used (open)
42	VSS	—	Ground terminal
43 to 47	SH4 to SH8	O	Sample hold pulse (4 to 8) output terminal (for high voltage-proof SH/positive polarity) Not used (open)
48	VDD	—	Power supply terminal (+5V)
49	RGT	O	Left-right inversion distinguishing signal output to the L & R LCD units “L”: left, “H”: right
50	XRGT	O	Left-right inversion distinguishing signal output terminal (reverse polarity of the RGT ㊾ pin) “L”: right, “H”: left Not used (open)
51	MODE3	O	Mode changes signal output to the L & R LCD units
52	VSS	—	Ground terminal

Pin No.	Pin Name	I/O	Function
53	MODE2	O	Mode changes signal output to the L & R LCD units
54	MODE1	O	Mode changes signal output to the L & R LCD units
55	HST	O	Horizontal start pulse output to the L & R LCD units
56	HCK1	O	Horizontal clock 1 pulse output to the L & R LCD units
57	HCK2	O	Horizontal clock 2 pulse output to the L & R LCD units
58	BLK	O	Blanking pulse output to the L & R LCD units (positive polarity)
59	CLR	O	Clear pulse output to the L & R LCD units (positive polarity)
60	ENB	O	Enable pulse output to the L & R LCD units (negative polarity)
61	VCK	O	Vertical clock pulse output to the L & R LCD units
62	VST	O	Vertical start pulse output to the L & R LCD units
63	VSS	—	Ground terminal
64	TST7	I	Input terminal for the test Not used (open)
65	PCG	O	PCG pulse output to the gamma control IC (IC201) and L & R LCD units (positive polarity)
66	TST8	I	Input terminal for the test Not used (open)
67	DWN	O	Up-down inversion distinguishing signal output to the L & R LCD units "L": up, "H": down
68	RSTR	O	Reset read signal output to the line memory (IC1104 to 1106) (for high speed line buffer/negative polarity)
69	RCK	O	Read clock signal output to the video RGB A/D converter (IC1101 to 1103), line memory (IC1104 to 1106) and video RGB D/A converter (IC1201) (for high speed line buffer)
70	RSTW	O	Reset write signal output to the line memory (IC1104 to 1106) (for high speed line buffer/negative polarity)
71	WCK	O	Write clock signal output to the video RGB A/D converter (IC1101 to 1103) and line memory (IC1104 to 1106) (for high speed line buffer)
72	VSS	—	Ground terminal
73	VDD	—	Power supply terminal (+5V)
74	XCLR	I	System clear signal input from the system controller (IC501) "L": all clear
75	PRE	I	Input terminal for the presetting ("L": preset to Macintosh 16 mode) Fixed at "H" in this set
76, 77	TST9, TST10	I	Input terminal for the test Not used (open)
78	FLDI	I	Field distinguishing signal input terminal In this set, the signal from FLDO ⑲ pin is input
79	FLDO	O	Field distinguishing signal output terminal
80	HD	O	Horizontal drive pulse output terminal (positive polarity)

• **MA-324 BOARD IC302 CXA3106Q (PLL)**

Pin No.	Pin Name	I/O	Function
1	IOVCC	—	Power supply terminal (+5V) (digital system)
2	IOGND	—	Ground terminal (digital system)
3	VCOH	I	External VCO input terminal Not used (open)
4	VCOL	I	External inverted VCO input terminal Not used (open)
5	VCO	I	External VCO input terminal Not used (open)
6	HOLD	I	Phase comparison disable signal input terminal Not used (fixed at “L”)
7	SYNCH	I	Sync signal input terminal Not used (open)
8	SYNCL	I	Inverted sync signal input terminal Not used (open)
9	SYNC	I	Horizontal sync signal input terminal
10	SENABLE	I	Enable signal input from the system controller (IC501)
11	SCLK	I	Serial data transfer clock signal input from the system controller (IC501)
12	SDATA	I	Serial data input from the system controller (IC501)
13	TLOAD	I	Programmable counter test input terminal Not used (fixed at “H”)
14	CS	I	Chip select signal input terminal Not used (fixed at “H”)
15	SEROUT	O	Register read output terminal Not used (open)
16	DIVOUT	O	Programmable counter test output terminal Not used (open)
17	UNLOCK	O	Unlock signal output terminal Not used (open)
18	DVCC	—	Power supply terminal (+5V) (digital system)
19	DGND	—	Ground terminal (digital system)
20	CLK/2N	O	Inverted 1/2 clock signal output terminal Not used (open)
21	CLK/2	O	1/2 clock signal output terminal Not used (open)
22	CLKN	O	Inverted clock signal output terminal Not used (open)
23	CLK	O	Clock signal output to the LCD timing generator (IC301) and on screen display controller (IC401)
24	DSYNC	O	Delay sync signal output to the LCD timing generator (IC301)
25	TTLGND	—	Ground terminal (for TTL output)
26	TTLVCC	—	Power supply terminal (+5V) (for TTL output)
27	IOGND	—	Ground terminal (digital system)
28	PECLVCC	—	Power supply terminal (+5V) (for PECL output)
29	CLK/2L	O	Inverted 1/2 clock signal output terminal Not used (pull-up)
30	CLK/2H	O	1/2 clock signal output terminal Not used (pull-up)
31	CLKL	O	Inverted clock signal output to the LCD drive IC (IC202 to 204)
32	CLKH	O	Clock signal output to the LCD drive IC (IC202 to 204)
33	DSYNCL	O	Delay sync signal output terminal Not used (pull-up)
34	DSYNCH	O	Inverted delay sync signal output terminal Not used (pull-up)
35	VBB	O	Reference voltage output for the PECL Not used (open)
36	PECLVCC	—	Power supply terminal (+5V) (for PECL output)
37	IOGND	—	Ground terminal (digital system)
38	IOVCC	—	Power supply terminal (+5V) (digital system)
39	PLLVCC	—	Power supply terminal (+5V) (for PLL circuit/analog system)
40	PLLGND	—	Ground terminal (for PLL circuit/analog system)
41	VCOVCC	—	Power supply terminal (+5V) (for VCO circuit/analog system)
42	VCOGND	—	Ground terminal (for VCO circuit/analog system)
43	VCOHGND	—	Ground terminal (for VCO sub/analog system)
44	IREF	—	Charge pump current generating terminal
45	RC2	—	Connection terminal of low-pass filter for the charge pump

Pin No.	Pin Name	I/O	Function
46	RC1	—	Connection terminal of low-pass filter for the charge pump
47	IRGND	—	Ground terminal (for IREF circuit/analog system)
48	IRVCC	—	Power supply terminal (+5V) (for IREF circuit/analog system)

• MA-324 BOARD IC401 MB90096PF-G-150-BND (ON SCREEN DISPLAY CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	CPOUT	O	Horizontal sync phase comparison result output terminal Not used (open)
2	AVSS1	—	Ground terminal (for internal VCO)
3	VCOIN	I	Internal VCO voltage input terminal Not used (fixed at "L")
4	AVSS2	—	Ground terminal (for internal VCO)
5	$\overline{\text{RESET}}$	I	System reset signal input from the system controller (IC501) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
6	$\overline{\text{TEST}}$	I	Input terminal for the test Not used (fixed at "H")
7	VSS	—	Ground terminal
8	DOCKI	I	Dot clock signal input from the PLL (IC302)
9	DOCKO	O	Dot clock signal output terminal Not used (open)
10	$\overline{\text{FH}}$	O	Output terminal of horizontal sync signal generated in PLL circuit Not used (open)
11	EVEN	I	Field control signal input terminal Not used (fixed at "H")
12	$\overline{\text{HSYNC}}$	I	Horizontal sync signal input from the LCD timing generator (IC301) Based in this signal period, dot clock signal is generated Active level is programmable
13	$\overline{\text{VSYNC}}$	I	Vertical sync signal input from the LCD timing generator (IC301) Active level is programmable
14	DISP	I	Display outputs (ROUT, GOUT, BOUT, IOUT, VOB1, VOB2) control signal input from the system controller (IC501)
15	VOB2	O	Semi-transparent period output terminal Active level is programmable Not used (open)
16	VOB1	O	OSD display period output terminal Active level is programmable
17	IOUT (C3)	O	Color signal (I) output terminal Active level is programmable Not used (open)
18	GOUT (C2)	O	Color signal (G) output terminal Active level is programmable
19	ROUT (C1)	O	Color signal (R) output terminal Active level is programmable
20	BOUT (C0)	O	Color signal (B) output terminal Active level is programmable
21	V3V	—	Coupling capacitor connection terminal
22	VCC	—	Power supply terminal (+5V)
23	TRE	O	Output of signal indicating that the command is being transferred to system controller (IC501) and the fill operation is under way "H" active
24	SCLK	I	Serial data transfer clock signal input from the system controller (IC501)
25	SIN	I	Serial data input from the system controller (IC501)
26	$\overline{\text{CS}}$	I	Chip select signal input from the system controller (IC501) "L" active
27	AVCC	—	Power supply terminal (+5V) (for internal VCO)
28	AV3V	—	Coupling capacitor connection terminal

• **MA-324 BOARD IC501 S579186PZ-TEB (SYSTEM CONTROLLER)**

Pin No.	Pin Name	I/O	Function
1	LANC IN	I	LANC data input for adjustment
2	LANC OUT	O	LANC data output for adjustment
3	XS CONT	O	Video selection signal output terminal "L": S terminal, "H": composite Not used
4	—	O	Not used (open)
5	IIC SDA	I/O	Two-way data bus with the gamma control IC (IC201)
6	IIC SCL	O	Shift clock signal output to the gamma control IC (IC201)
7, 8	—	O	Not used (open)
9	$\overline{\text{XSYS RES}}$	O	Reset signal output to the D/A converter (IC207), on screen display controller (IC401), etc. "L": reset
10 to 12	—	O	Not used (open)
13	VSS	—	Ground terminal
14	XPOWER SW	I	Power (on/off) switch (S902) input terminal "L" active
15	XENTER	I	Jog dial click input from rotary encoder (S905) for the menu setting "L" active
16	XMENU	I	Menu selection (menu on/off) switch (S903) input terminal "L" active
17	XPASS RES	I	Password reset switch (S501) input terminal "L" active
18	VIDEO/XPC IN	I	Input selection (video/PC) switch (S904) input terminal "L": PC, "H": video
19	PC/XV AU CONT	O	Control signal output to the sync signal select switch (IC132, 133) and audio line select switch (IC1301, 1302) "L": video, "H": PC
20	EXT 3D CONT	O	External 3D control signal output terminal "H" active Not used
21	SHUTTER MUTE	O	Shutter wave mute control signal output terminal "H": mute on
22	XCS TG	O	Chip select signal output to the LCD timing generator (IC301) "L" active
23	XCS PLL	O	Chip select signal output to the PLL (IC302) "L" active
24	XCS DA5	O	Chip select signal output to the D/A converter (IC205, 206) "L" active
25	XCS DA12	O	Chip select signal output to the D/A converter (IC207) "L" active
26	XCS EEPROM	O	Chip select signal output to the EEPROM (IC502) "L" active
27	XEEPROM WE	O	Data write enable signal output to the EEPROM (IC502) "L" active
28	XCS DAYC	O	Chip select signal output to the D/A converter (IC507) "L" active
29	P SAVE LED	O	LED drive signal output of the POWER SAVING indicator (D901-red) "H": LED on
30	—	I	Not used (fixed at "L")
31	HSYNC2	I	Horizontal sync signal (external event) input terminal Horizontal sync signal frequency is divided, then input "H" active
32	—	I	Not used (fixed at "L")
33	HI SI	I	Serial data input from the EEPROM (IC502)
34	HI SO	O	Serial data output to the D/A converter (IC205 to 207), LCD timing generator (IC301), PLL (IC302), on screen display controller (IC401), EEPROM (IC502) and D/A converter (IC507)
35	XHI SCK	O	Serial data transfer clock signal output to the D/A converter (IC205 to 207), LCD timing generator (IC301), PLL (IC302), on screen display controller (IC401), EEPROM (IC502) and D/A converter (IC507)
36	SHUTTER	O	Shutter wave (500 Hz rectangular wave) output terminal Frequency is divided into 4 externally
37	—	O	Not used (open)
38	$\overline{\text{XRESET}}$	I	System reset signal input from the reset signal generator (IC504) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
39	VSS	—	Ground terminal
40	20MHZ OUT	O	Main system clock output terminal (20 MHz)
41	20MHZ IN	I	Main system clock input terminal (20 MHz)
42	VDD	—	Power supply terminal (+5V)

Pin No.	Pin Name	I/O	Function
43	XCS OSD	O	Chip select signal output to the on screen display controller (IC401) "L" active
44	MOD UNDEF	O	Output terminal for the test (signal judgment result uncertain ("H" active)) Not used (open)
45	PLL ERROR	O	Output terminal for the test (PLL communication (7h) error ("H" active)) Not used (open)
46	MOD CHG	O	Output terminal for the test (signal judgment result variable (toggle)) Not used (open)
47	OSD TRE	I	Monitor input during transfer operation from the on screen display controller (IC401) "H" active
48	XALVS ON	O	AVLS on/off control signal output to the headphone amplifier (IC151) "L": AVLS on
49	DBB MID ON	O	DBB control signal output to the headphone amplifier (IC151) *1
50	DBB NORM ON	O	DBB control signal output to the headphone amplifier (IC151) *1
51	VDD	—	Power supply terminal (+5V)
52	32KHZ IN	I	Sub system clock input terminal (32.768 kHz) (for clock)
53	32KHZ OUT	O	Sub system clock output terminal (32.768 kHz) (for clock)
54	VSS	—	Ground terminal
55	3D ON	O	Control signal output for the 3D (L & R independent) screen display "H" active
56	3D L/R	O	3D L/R picture selection inverted output terminal Not used (open)
57	$\overline{\text{XTG RES}}$	O	Reset signal output to the LCD timing generator (IC301) "L": reset
58	OSD DISP	O	Display outputs (R/G/B OUT, IOUT, VOB1, VOB2) control signal output to the on screen display controller (IC401)
59	EXT/XINT	O	Sync selection signal output to the sync signal select switch (IC447, 451) "L": internal sync signal selection, "H": external sync signal selection
60	—	O	Not used (open)
61	BATT IN	I	Power failure detection signal input terminal
62	XVSYNC	I	Vertical sync signal interruption input from the LCD timing generator (IC301) "L" active
63	XS DET	I	Connection detect signal input of the S terminal (S video in jack J1401) "L": connection
64	XEXT 3D IN	I	External 3D signal input terminal "L" active Not used (fixed at "H")
65	MENU A	I	Jog dial pulse input from rotary encoder (S905) for the menu setting (A phase input)
66	MENU B	I	Jog dial pulse input from rotary encoder (S905) for the menu setting (B phase input)
67	BRIGHT B	I	Jog dial pulse input from rotary encoder (S1301) for the BRIGHT control (B phase input)
68	BRIGHT A	I	Jog dial pulse input from rotary encoder (S1301) for the BRIGHT control (A phase input)
69	—	I	Not used (fixed at "L")
70	TEMP	I	Connection terminal of the board temperature sensor (analog input)
71	BATT SENS	I	Input of the battery capacity detection (analog input)
72	CHARGE A/D	I	Input of the charging voltage and battery voltage detection (analog input)
73	DC IN A/D	I	DC input voltage detection (analog input)
74	AVSS	—	Ground terminal (for A/D converter)
75	AVREF0	I	Reference voltage (+5V) input terminal (for A/D converter)
76	AVREF1	I	Reference voltage (+5V) input terminal (for A/D converter)
77	AVDD	—	Power supply terminal (+5V) (for A/D converter)
78	HSYNC DET	I	External horizontal sync detection signal input from the CXA1616N (IC443) "H": horizontal sync signal detected
79	VSYNC DET	I	External vertical sync detection signal input from the CXA1616N (IC443) "H": vertical sync signal detected
80	POL H	I	External horizontal sync polarity input from the CXA1616N (IC443) "L": positive polarity, "H": negative polarity
81	POL V	I	External vertical sync polarity input from the CXA1616N (IC443) "L": positive polarity, "H": negative polarity
82	XLOOK ON	I	Picture watching detection signal input terminal "L": picture watching
83	XVIDEO SYNC DET	I	Video signal sync detection signal input terminal "L": sync signal detected

Pin No.	Pin Name	I/O	Function
84	DC IN MON	I	Connection detect signal input of the DC IN jack (J701) "L": DC IN jack connected
85	BATT IN MON	I	Connection detect signal input of the battery pack "L": battery pack connected
86, 87	VDD	—	Power supply terminal (+5V)
88	VSS	—	Ground terminal
89	V MUTE	O	Video mute on/off control signal output terminal "H": mute on
90	AU MUTE	O	Audio mute on/off control signal output to the headphone amplifier (IC151) "H": mute on
91	POWER LED	O	LED drive signal output of the POWER ON indicator (D901-green) "H": LED on
92	CHARGE LED	O	LED drive signal output of the CHARGE indicator (D902) "H": LED on
93	BL ON	O	Back light unit on/off control signal output terminal "H": back light on
94	DD MAIN	O	Main system power on/off control signal output to the DC/DC converter (IC701, 703) "H": power on
95	CHARGE ON	O	Charging on/off control signal output terminal "H": charge on
96	BATT CHK	O	Control signal output to the battery check circuit "H" active
97	BATT CONT	O	Power supply (DC IN jack/battery pack) selection signal output terminal "L": DC IN jack selection, "H": battery pack selection
98	DD SENSOR	O	Sensor system and fan motor power on/off control signal output to the DC/DC converter (IC701) "H": power on
99	PC/XVIDEO CONT	O	Picture input signal selection control signal output to the PC/video RGB selector (IC131) "L": video, "H": PC
100	VIDEO 5V ON	O	Video system power on/off control signal output terminal "H": power on

*1 DBB control

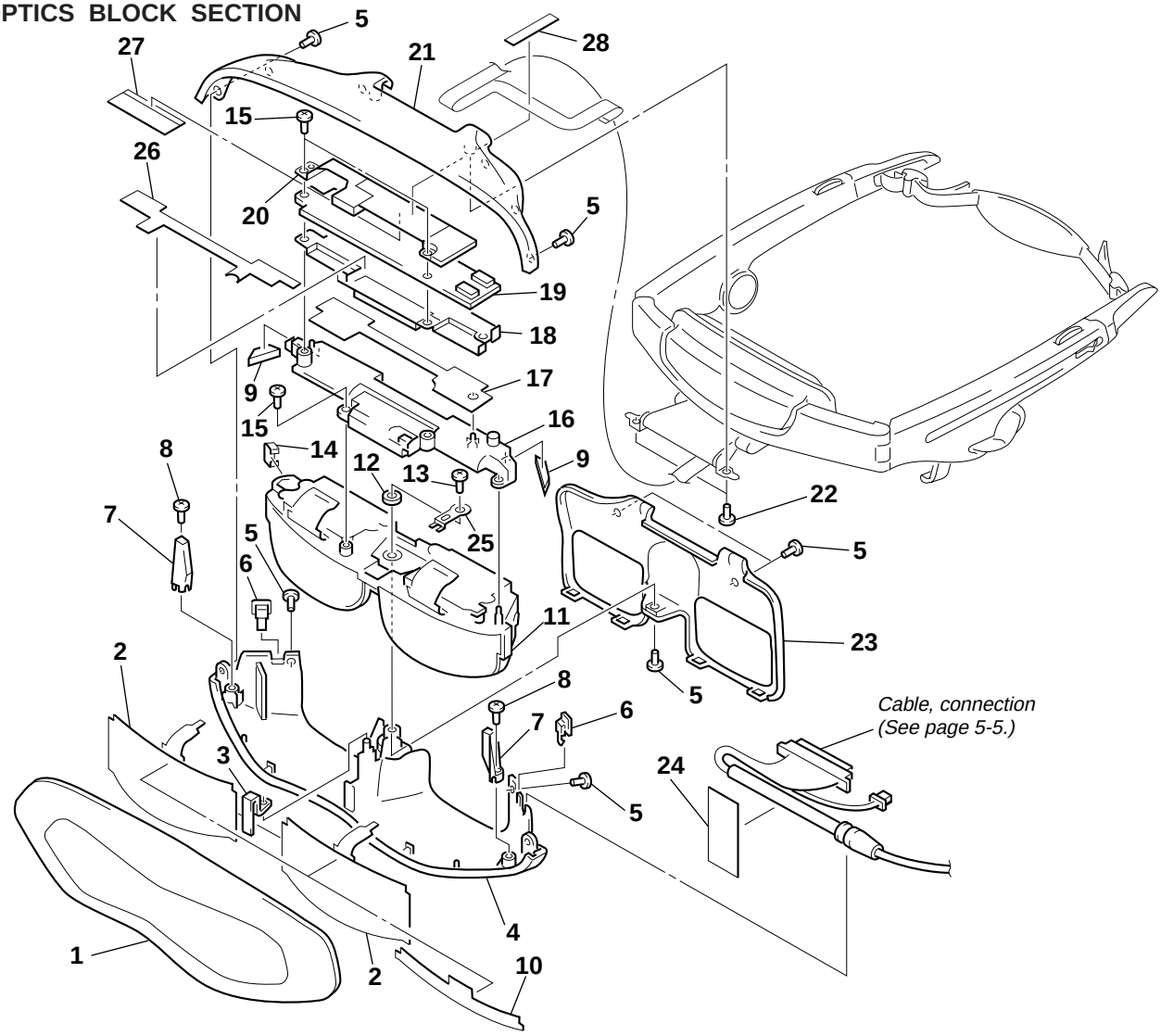
Terminal \ Mode	Normal	Mid	Max
DBB MID ON (pin ㊾)	"L"	"H"	"L"
DBB NORM ON (pin ㊿)	"H"	"L"	"L"

SECTION 5
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

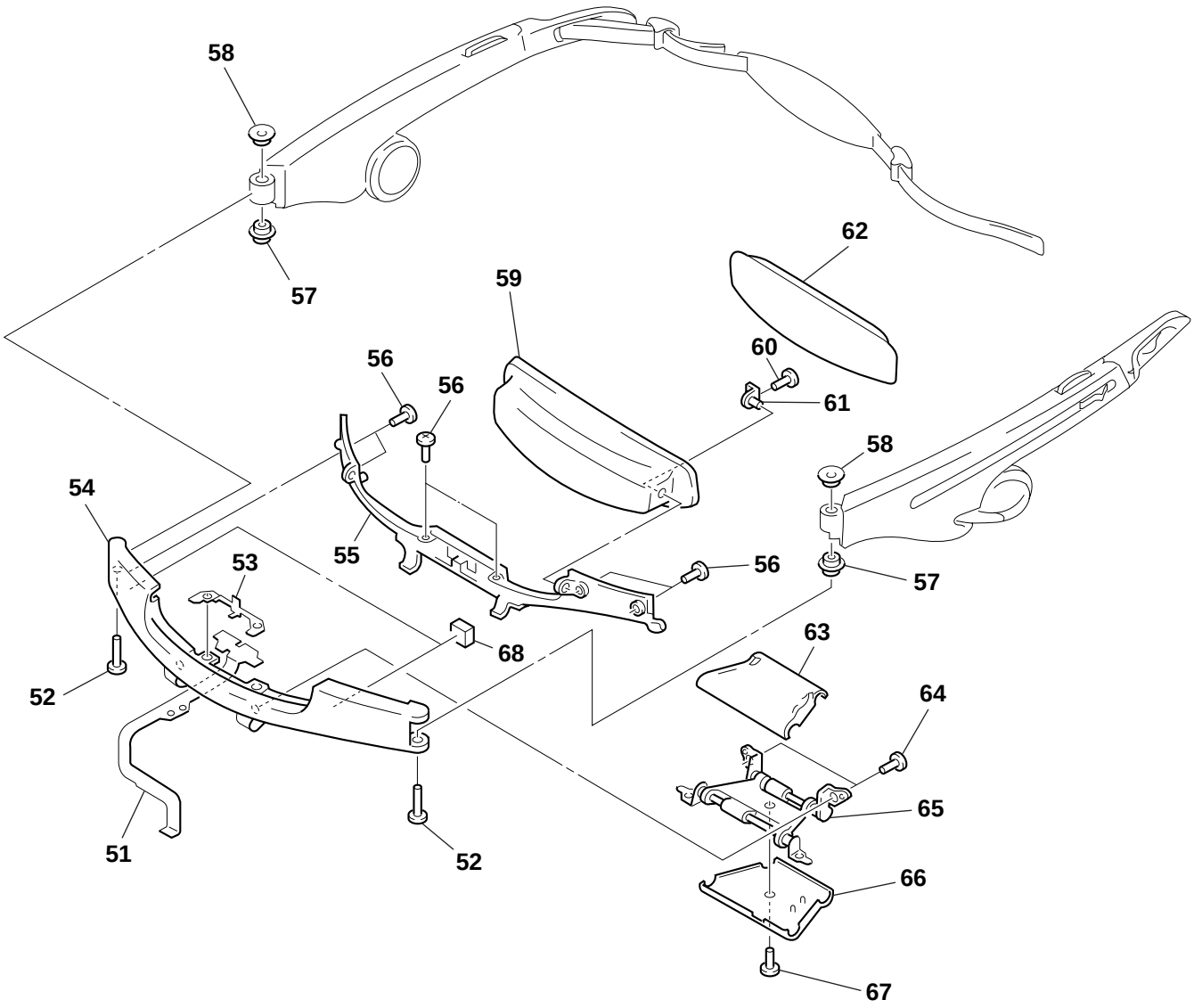
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) OPTICS BLOCK SECTION



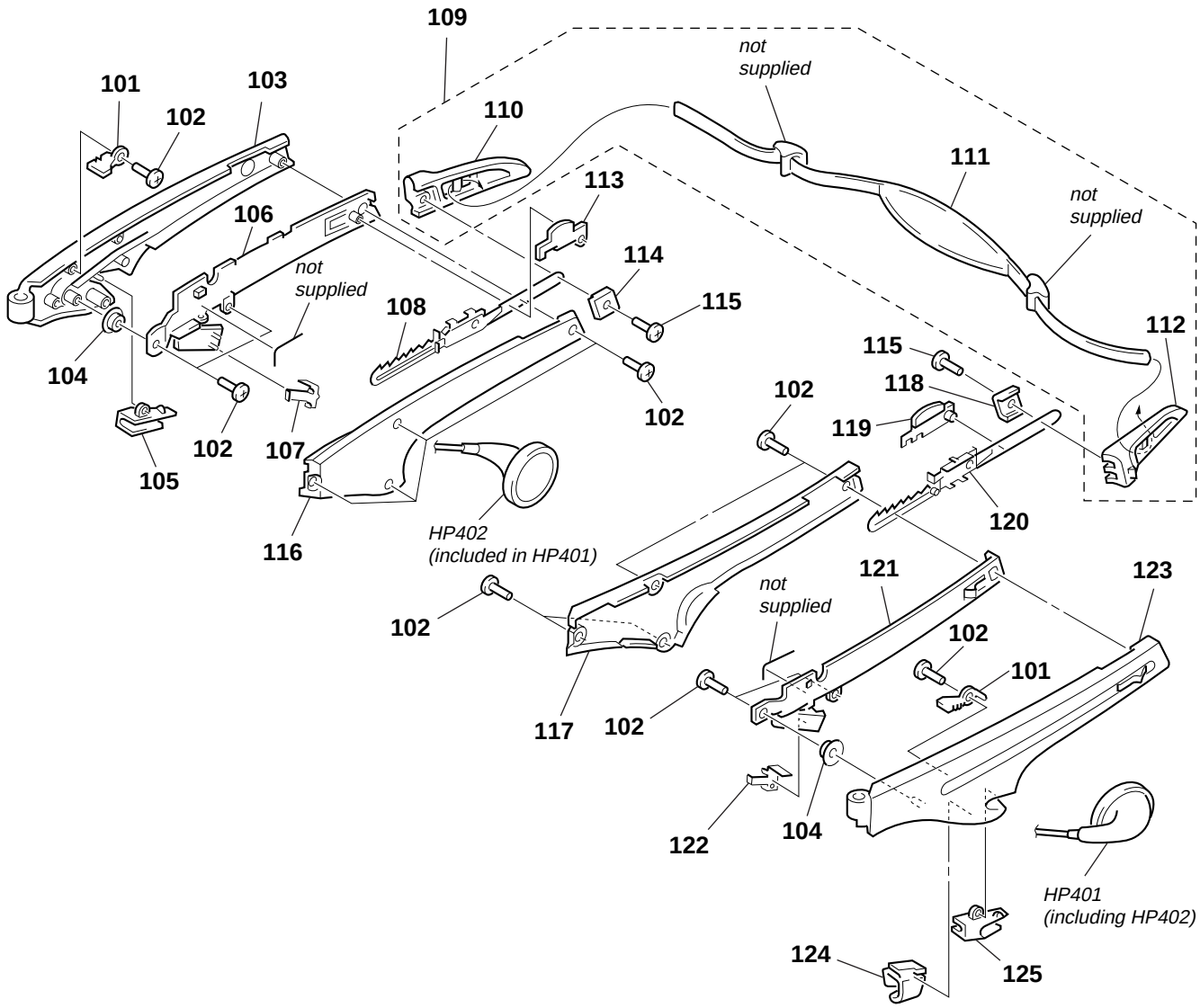
Ref. No.	Part No.	Description	Remark
1	3-989-997-01	PANEL, FRONT	
2	1-803-159-11	LIQUID CRYSTAL, FILM (PANEL)	
3	3-050-003-01	HOLDER (C), SHUTTER	
4	3-989-999-01	CABINET, LOWER	
5	3-704-197-31	SCREW (M1.4X3.0), LOCKING	
6	3-050-058-01	LOCK, HOOD	
7	3-050-004-01	HOLDER (S), SHUTTER	
8	3-704-197-32	SCREW (M1.4X3.0)	
9	3-050-253-01	CUSHION, LIGHT INTERCEPTION	
10	3-050-254-01	SHEET (A), LIGHT INTERCEPTION	
11	A-7093-809-A	OPTICS BLOCK ASSY	
12	3-989-995-01	RUBBER (C), FLOATING	
13	3-704-243-62	SCREW (P1.7X4.0)	
14	3-989-996-01	RUBBER (R), FLOATING	
15	3-713-791-41	SCREW (M1.7X5), TAPPING, P2	
⚠16	1-475-821-21	LIGHT UNIT, BACK	
17	4-638-895-01	SHEET, REFLECTOR	
18	3-050-006-01	CASE (LOWER), SHIELD	
19	A-7073-586-A	LC-61 BOARD, COMPLETE	
20	3-050-005-01	CASE (UPPER), SHIELD	
21	3-989-998-11	CABINET, UPPER	
22	3-713-786-01	SCREW (M2X4)	
23	X-3948-712-1	CABINET ASSY, REAR	
24	3-050-009-01	SHEET, COPPER LEAF	
25	4-639-695-01	PLATE, LENS FIXED	
26	4-639-828-01	INSULATING SHEET, LC	
27	4-640-984-01	INSULATING SHEET (UPPER), LC	
28	4-640-100-01	SHEET, FLEXIBLE FIXED	

(2) LOADING BLOCK SECTION-1



Ref. No.	Part No.	Description	Remark
51	1-670-349-11	FP-661 FLEXIBLE BOARD	
52	3-050-046-01	SHAFT, HINGE	
53	3-050-057-01	HOOK, SPRING	
54	3-050-119-01	CABINET (FRONT), FRONT	
55	X-3948-713-1	CABINET (REAR) ASSY, FRONT	
56	3-704-197-31	SCREW (M1.4X3.0), LOCKING	
57	3-050-056-01	BEARING (LOWER), CABINET HINGE	
58	3-050-055-01	BEARING (UPPER), CABINET HINGE	
59	X-3948-835-1	COVER ASSY, PAD	
60	3-713-791-11	SCREW (M1.7X5), TAPPING, P2	
61	3-050-011-02	SHAFT (L), PAD	
62	3-050-015-01	PAD	
63	3-050-016-01	COVER (FRONT), HINGE	
64	3-713-786-01	SCREW (M2X4)	
65	X-3948-704-1	HINGE ASSY	
66	3-050-017-02	COVER (REAR), HINGE	
67	3-704-197-32	SCREW (M1.4X3.0)	
68	4-640-314-01	CUSHION, CORD FIXED	

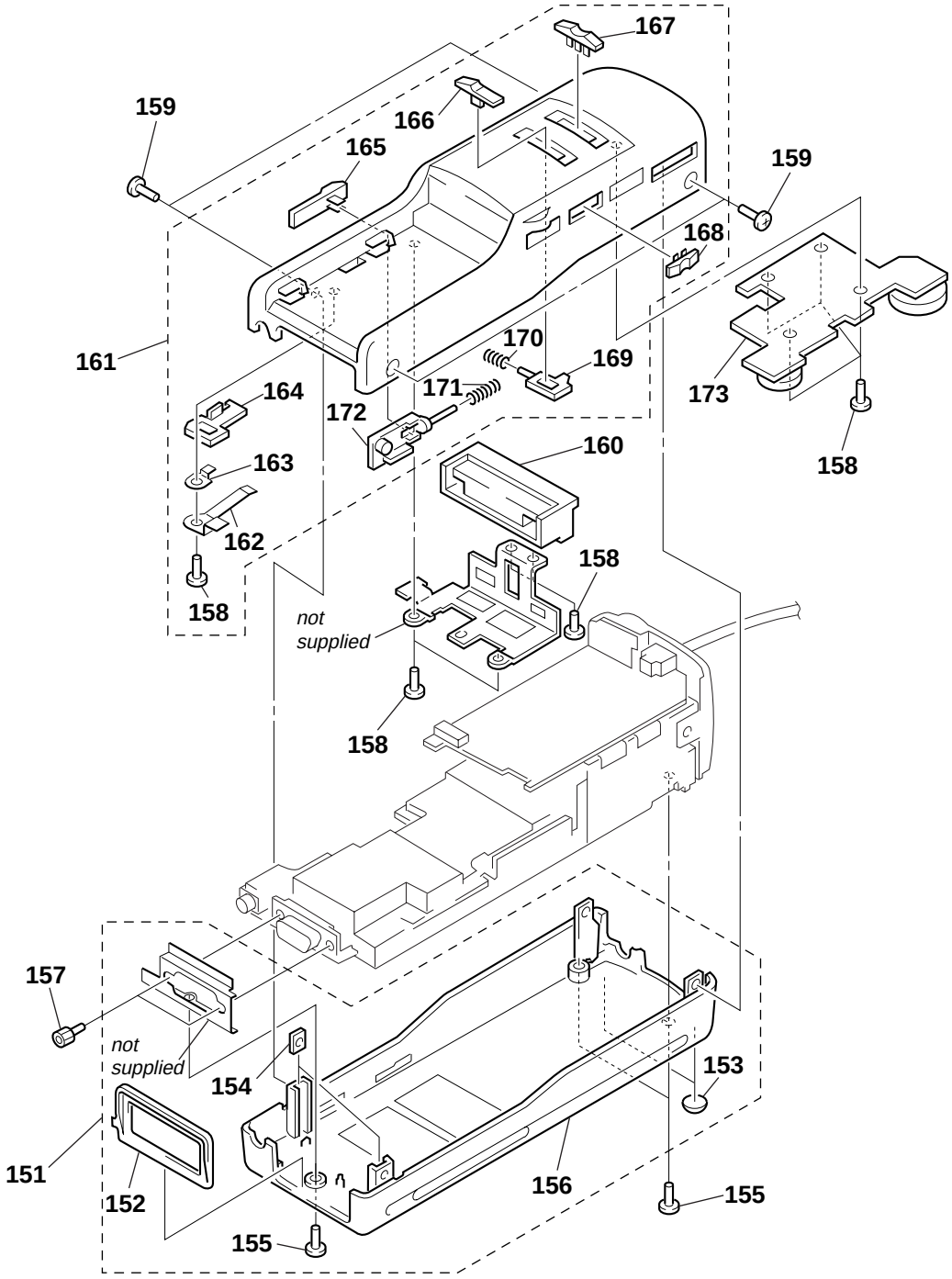
(3) LOADING BLOCK SECTION-2



Ref. No.	Part No.	Description	Remark
101	3-050-053-01	RETAINER, HP CORD	
102	3-704-197-31	SCREW (M1.4X3.0), LOCKING	
103	X-3948-714-1	CABINET (R) ASSY, HORIZONTAL	
104	3-050-029-01	PULLEY, FIXED	
105	3-050-034-11	GUIDE (R), HP CORD	
106	3-050-123-01	CABINET (R) (INNER), HORIZONTAL	
107	3-050-032-01	SPRING (R), HP LOCK	
108	X-3948-705-2	PLATE (R) ASSY, SLIDE	
109	A-7093-762-A	HEAD BELT ASSY	
110	3-050-047-01	HOOK (R) (FRONT), BELT	
111	3-050-063-01	BELT, HEAD	
112	3-050-048-01	HOOK (L) (FRONT), BELT	
113	3-050-036-01	BUTTON (R), RELEASE	

Ref. No.	Part No.	Description	Remark
114	3-050-049-01	HOOK (R) (REAR), BELT	
115	3-713-791-41	SCREW (M1.7X5), TAPPING, P2	
116	3-050-125-01	CABINET (R) (REAR), HORIZONTAL	
117	3-050-126-01	CABINET (L) (REAR), HORIZONTAL	
118	3-050-050-01	HOOK (L) (REAR), BELT	
119	3-050-037-01	BUTTON (L), RELEASE	
120	X-3948-706-2	PLATE (L) ASSY, SLIDE	
121	3-050-124-01	CABINET (L) (INNER), HORIZONTAL	
122	3-050-033-01	SPRING (L), HP LOCK	
123	X-3948-715-1	CABINET (L) ASSY, HORIZONTAL	
124	3-050-052-01	BUSHING, CORD	
125	3-050-035-11	GUIDE (L), HP CORD	
HP401	8-953-118-91	HEADPHONE MDR-E838PT/1 SET (including HP402)	

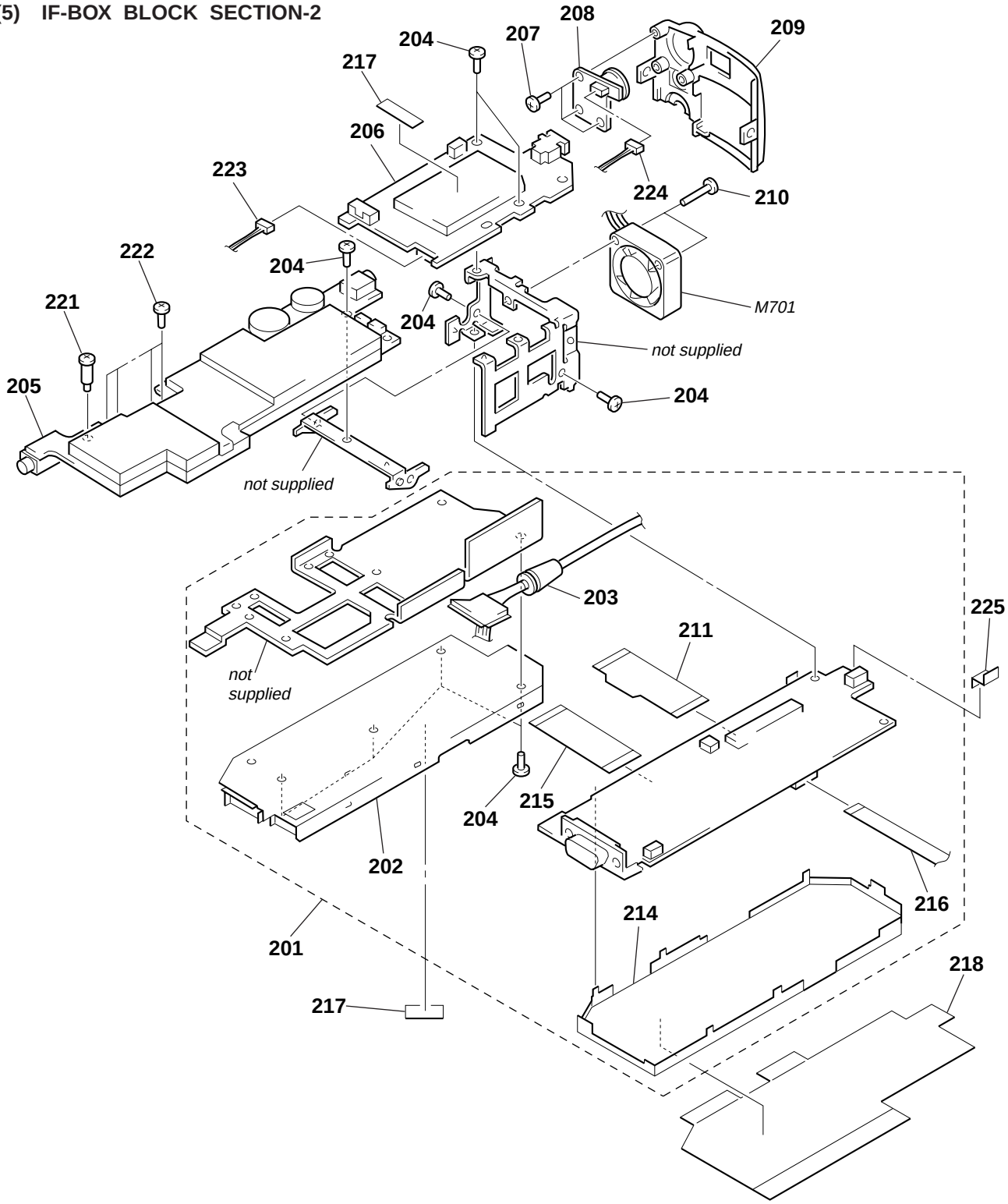
(4) IF-BOX BLOCK SECTION-1



Ref. No.	Part No.	Description	Remark
151	X-4621-960-1	CABINET (IF) ASSY, LOWER	
152	3-050-089-01	COVER, D-SUB	
153	3-740-607-01	CUSHION	
154	3-718-233-01	NUT, PLATE	
155	3-719-381-31	SCREW (M2X3)	
156	3-050-076-01	CABINET (IF), LOWER	
157	3-973-346-01	SCREW, D-SUB FITTING	
158	3-948-339-01	SCREW, TAPPING	
159	3-724-455-61	SCREW (M2X5)	
160	1-537-461-61	TERMINAL BOARD, BATTERY	
161	X-3948-727-1	CABINET ASSY (IF), UPPER	
162	3-050-070-01	SPRING, LOCK CLAW	

Ref. No.	Part No.	Description	Remark
163	3-050-069-01	RETAINER, LOCK CLAW	
164	3-050-067-01	CLAW, BATT LOCK	
165	3-050-068-01	KNOB, BATT RELEASE	
166	3-050-079-01	KNOB, PC/VIDEO	
167	3-050-073-01	KNOB, POWER	
168	3-050-081-01	KNOB, SCREEN	
169	3-050-074-01	PLATE, POWER SLIDE	
170	4-879-762-02	SPRING, COMPRESSION	
171	3-050-075-01	SPRING, COMPRESSION	
172	3-050-071-01	SLIDE, BATT RELEASE	
173	A-7073-587-A	SW-306 BOARD, COMPLETE	

(5) IF-BOX BLOCK SECTION-2



Ref. No.	Part No.	Description	Remark
201	A-8054-845-A	MA-324 BOARD, COMPLETE	
202	X-3948-754-1	CASE (UPPER) ASSY, MA SHIELD	
203	1-783-673-11	CABLE, CONNECTION	
204	3-719-381-31	SCREW (M2X3)	
205	A-8054-846-A	YC-148 BOARD, COMPLETE	
206	A-8054-848-A	DD-107 BOARD, COMPLETE	
207	3-948-339-01	SCREW, TAPPING	
208	A-8054-850-A	JK-136 BOARD, COMPLETE	
209	X-4622-061-1	CABINET ASSY (IF), FRONT	
210	4-640-745-01	SCREW, FAN BINDING	
211	1-670-350-11	FP-662 FLEXIBLE BOARD	

Ref. No.	Part No.	Description	Remark
214	3-050-083-01	CASE (LOWER), MA SHIELD	
215	1-783-675-11	CABLE, FLEXIBLE FLAT (FFC-233)	
216	1-783-676-11	CABLE, FLEXIBLE FLAT (FFC-234)	
217	3-050-340-01	SHEET, HARNESS FIXED	
218	3-050-335-01	SHEET (C), COVER	
221	4-640-103-01	SHAFT, PC BOARD FIXED	
222	7-627-553-18	SCREW (M2X2)	
223	1-958-818-11	HARNESS, DY-51	
224	1-959-295-11	HARNESS, YJ-A	
225	4-640-242-01	INSULATING SHEET, CABLE	
M701	1-763-122-21	MOTOR, DC FAN	

SECTION 6
ELECTRICAL PARTS LIST

DD-107

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-8054-848-A	DD-107 BOARD, COMPLETE			
		**********			
	3-050-086-01	CASE (UPPER), DD SHIELD			
	3-050-087-01	CASE (LOWER), DD SHIELD			
		< CAPACITOR >			
C701	1-164-937-81	CERAMIC CHIP	0.001uF	10%	16V
C702	1-164-935-81	CERAMIC CHIP	470PF	10%	16V
C703	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C704	1-164-670-91	CERAMIC CHIP	1200PF	5%	16V
C705	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C706	1-164-940-81	CERAMIC CHIP	0.0033uF	10%	16V
C707	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C708	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C709	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C710	1-164-938-81	CERAMIC CHIP	0.0015uF	10%	16V
C711	1-107-819-81	CERAMIC CHIP	0.022uF	10%	16V
C712	1-164-935-81	CERAMIC CHIP	470PF	10%	16V
C713	1-164-935-81	CERAMIC CHIP	470PF	10%	16V
C714	1-164-936-81	CERAMIC CHIP	680PF	10%	16V
C715	1-164-936-81	CERAMIC CHIP	680PF	10%	16V
C716	1-164-936-81	CERAMIC CHIP	680PF	10%	16V
C717	1-164-936-81	CERAMIC CHIP	680PF	10%	16V
C718	1-127-692-91	CERAMIC CHIP	10uF		16V
C719	1-117-370-91	CERAMIC CHIP	10uF		10V
C720	1-127-692-91	CERAMIC CHIP	10uF		16V
C721	1-104-932-91	CERAMIC CHIP	10uF		16V
C722	1-127-692-91	CERAMIC CHIP	10uF		16V
C723	1-127-692-91	CERAMIC CHIP	10uF		16V
C725	1-119-751-91	TANTAL. CHIP	22uF	20%	16V
C726	1-125-817-91	CERAMIC CHIP	10uF		6.3V
C727	1-125-817-91	CERAMIC CHIP	10uF		6.3V
C728	1-117-370-91	CERAMIC CHIP	10uF		10V
C729	1-127-692-91	CERAMIC CHIP	10uF		16V
C730	1-125-817-91	CERAMIC CHIP	10uF		6.3V
C731	1-117-370-91	CERAMIC CHIP	10uF		10V
C732	1-127-692-91	CERAMIC CHIP	10uF		16V
C751	1-127-692-91	CERAMIC CHIP	10uF		16V
C752	1-127-692-91	CERAMIC CHIP	10uF		16V
C753	1-127-692-91	CERAMIC CHIP	10uF		16V
C754	1-127-692-91	CERAMIC CHIP	10uF		16V
C755	1-127-692-91	CERAMIC CHIP	10uF		16V
C756	1-127-692-91	CERAMIC CHIP	10uF		16V
C757	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C758	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C759	1-113-642-91	TANTAL. CHIP	47uF	20%	10V
C760	1-115-581-91	TANTAL. CHIP	100uF	20%	16V
C761	1-164-852-81	CERAMIC CHIP	12PF	5%	16V
C762	1-164-878-81	CERAMIC CHIP	150PF	5%	16V
C763	1-164-850-81	CERAMIC CHIP	10PF	0.5PF	16V
C764	1-164-872-81	CERAMIC CHIP	82PF	5%	16V
C765	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C766	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C767	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C769	1-104-823-91	TANTAL. CHIP	47uF		10V
C781	1-162-964-91	CERAMIC CHIP	0.001uF	10%	50V
C782	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C783	1-162-964-91	CERAMIC CHIP	0.001uF	10%	50V
C784	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C785	1-164-156-91	CERAMIC CHIP	0.1uF		2.5V
C786	1-104-932-91	CERAMIC CHIP	10uF		16V
C787	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C788	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C789	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C790	1-164-947-91	CERAMIC CHIP	0.01uF		16V
C791	1-117-370-91	CERAMIC CHIP	10uF		10V
C792	1-111-253-91	TANTAL. CHIP	100uF		
		< CONNECTOR >			
CN701	1-750-358-21	CONNECTOR, FFC/FPC (ZIF) 30P			
* CN702	1-764-250-21	PIN, CONNECTOR (PC BOARD) 4P			
CN703	1-770-623-21	PIN, CONNECTOR 6P			
CN704	1-695-320-21	PIN, CONNECTOR 2P			
		< DIODE >			
D701	8-719-065-59	DIODE MBR0530T1			
D702	8-719-065-59	DIODE MBR0530T1			
D751	8-719-066-98	DIODE RB051L-40TE25			
D752	8-719-066-98	DIODE RB051L-40TE25			
D755	8-719-423-10	DIODE MA8110-M-TX			
D781	8-719-420-92	DIODE MA8051-M-TX			
D782	8-719-047-40	DIODE MA737-TX			
D783	8-719-047-40	DIODE MA737-TX			
D784	8-719-047-40	DIODE MA737-TX			
D785	8-719-047-40	DIODE MA737-TX			
D786	8-719-052-17	DIODE MA10705-TX			

DD-107

Ref. No.	Part No.	Description	Remark
D787	8-719-017-77	DIODE MA8030-TX	
D788	8-719-017-77	DIODE MA8030-TX	
D789	8-719-420-92	DIODE MA8051-M-TX	
D790	8-719-017-92	DIODE MA8160-TX	
D791	8-719-017-92	DIODE MA8160-TX	
D792	8-719-017-92	DIODE MA8160-TX	
D793	8-719-017-92	DIODE MA8160-TX	
D794	8-719-017-92	DIODE MA8160-TX	
D795	8-719-017-92	DIODE MA8160-TX	
D796	8-719-066-98	DIODE RB051L-40TE25	
		< IC LINK >	
F701	1-533-672-21	LINK, IC (SMD)	
F702	1-533-672-21	LINK, IC (SMD)	
F703	1-533-672-21	LINK, IC (SMD)	
F704	1-533-672-21	LINK, IC (SMD)	
F705	1-533-672-21	LINK, IC (SMD)	
F706	1-533-672-21	LINK, IC (SMD)	
		< FERRITE BEAD >	
FB781	1-469-176-21	INDUCTOR 0uH	
FB782	1-469-176-21	INDUCTOR 0uH	
		< FILTER >	
FL701	1-234-108-21	FILTER, EMI	
FL702	1-234-108-21	FILTER, EMI	
FL703	1-234-108-21	FILTER, EMI	
FL704	1-234-108-21	FILTER, EMI	
FL705	1-234-108-21	FILTER, EMI	
FL706	1-234-108-21	FILTER, EMI	
FL707	1-234-108-21	FILTER, EMI	
FL708	1-234-108-21	FILTER, EMI	
FL709	1-234-108-21	FILTER, EMI	
		< IC >	
IC701	8-759-060-94	IC MB3785APFV-G-BND-ER	
IC703	8-759-540-51	IC MAX863EEE-TG068	
		< JACK >	
J701	1-568-727-31	JACK, DC (DC IN 8.4V)	
		< COIL >	
L701	1-411-197-21	COIL, DD CONVERTER	
L702	1-411-197-21	COIL, DD CONVERTER	
L703	1-416-047-21	INDUCTOR 27uH	
L704	1-416-047-21	INDUCTOR 27uH	
L705	1-416-047-21	INDUCTOR 27uH	
L706	1-414-757-91	INDUCTOR 100uH	
L707	1-414-400-21	INDUCTOR 22uH	
L708	1-414-756-91	INDUCTOR 47uH	
L709	1-414-756-91	INDUCTOR 47uH	
L710	1-469-021-21	INDUCTOR 4.7uH	
L711	1-414-402-21	INDUCTOR 4.7uH	
L712	1-469-021-21	INDUCTOR 4.7uH	
L751	1-411-197-21	COIL, DD CONVERTER	
L752	1-411-197-21	COIL, DD CONVERTER	
L753	1-469-021-21	INDUCTOR 4.7uH	
L754	1-469-021-21	INDUCTOR 4.7uH	
L781	1-414-410-21	INDUCTOR 10uH	
		< FUSE >	
⚠PS701	1-533-979-21	FUSE (SMD)	
⚠PS702	1-533-979-21	FUSE (SMD)	
		< TRANSISTOR >	
Q701	8-729-044-91	TRANSISTOR CPH3100-PM-TL	
Q702	8-729-044-33	TRANSISTOR CPH670-I-TL	
Q703	8-729-044-33	TRANSISTOR CPH670-I-TL	
Q704	8-729-044-33	TRANSISTOR CPH670-I-TL	
Q705	8-729-045-31	TRANSISTOR MMDF3N04HDR2	
Q706	8-729-928-91	TRANSISTOR DTC114EE-TL	
Q707	8-729-928-28	TRANSISTOR DTA144EE-TL	
Q751	8-729-043-44	TRANSISTOR CPH3106-PM-TL	
Q753	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q781	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q782	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q783	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q784	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q785	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q786	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q787	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q788	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q789	8-729-928-82	TRANSISTOR DTC144EE-TL	
Q791	8-729-041-69	TRANSISTOR MMSF5P02HDR2	
Q792	8-729-041-69	TRANSISTOR MMSF5P02HDR2	
Q793	8-729-041-69	TRANSISTOR MMSF5P02HDR2	
Q794	8-729-041-69	TRANSISTOR MMSF5P02HDR2	
Q795	8-729-045-30	TRANSISTOR MMDF2P02HDR2	
Q796	8-729-045-30	TRANSISTOR MMDF2P02HDR2	
		< RESISTOR >	
R701	1-218-977-81	RES, CHIP 100K 5% 1/16W	
R702	1-218-990-81	SHORT 0	
R703	1-218-964-81	RES, CHIP 8.2K 5% 1/16W	
R704	1-218-881-91	RES, CHIP 27K 0.50% 1/16W	
R705	1-218-873-91	RES, CHIP 12K 0.50% 1/16W	
R706	1-218-875-91	RES, CHIP 15K 0.50% 1/16W	
R707	1-218-971-81	RES, CHIP 33K 5% 1/16W	
R708	1-218-970-81	RES, CHIP 27K 5% 1/16W	
R709	1-218-962-81	RES, CHIP 5.6K 5% 1/16W	
R710	1-218-963-81	RES, CHIP 6.8K 5% 1/16W	
R711	1-218-875-91	RES, CHIP 15K 0.50% 1/16W	
R712	1-218-877-91	RES, CHIP 18K 0.50% 1/16W	
R713	1-218-885-91	RES, CHIP 39K 0.50% 1/16W	
R714	1-218-974-81	RES, CHIP 56K 5% 1/16W	
R716	1-218-969-81	RES, CHIP 22K 5% 1/16W	
R717	1-218-862-91	RES, CHIP 4.3K 0.50% 1/16W	
R718	1-218-973-81	RES, CHIP 47K 5% 1/16W	
R719	1-218-964-81	RES, CHIP 8.2K 5% 1/16W	
R720	1-218-873-91	RES, CHIP 12K 0.50% 1/16W	
R721	1-218-881-91	RES, CHIP 27K 0.50% 1/16W	
R722	1-218-951-81	RES, CHIP 680 5% 1/16W	
R723	1-218-873-91	RES, CHIP 12K 0.50% 1/16W	
R724	1-218-881-91	RES, CHIP 27K 0.50% 1/16W	
R725	1-218-875-91	RES, CHIP 15K 0.50% 1/16W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R726	1-218-875-91	RES, CHIP	15K	0.50%	1/16W
R727	1-220-254-91	RES, CHIP	56	5%	1/4W
R728	1-220-254-91	RES, CHIP	56	5%	1/4W
R729	1-216-033-91	RES, CHIP	220	5%	1/10W
R730	1-216-027-91	RES, CHIP	120	5%	1/10W
R731	1-218-990-81	SHORT	0		
R735	1-218-990-81	SHORT	0		
R738	1-218-990-81	SHORT	0		
R751	1-218-919-91	RES, CHIP	1M	0.50%	1/16W
R752	1-218-865-91	RES, CHIP	5.6K	0.50%	1/16W
R753	1-218-893-91	RES, CHIP	82K	0.50%	1/16W
R754	1-218-919-91	RES, CHIP	1M	0.50%	1/16W
R755	1-218-884-91	RES, CHIP	36K	0.50%	1/16W
R756	1-218-901-91	RES, CHIP	180K	0.50%	1/16W
R757	1-218-977-81	RES, CHIP	100K	5%	1/16W
R758	1-218-973-81	RES, CHIP	47K	5%	1/16W
R759	1-218-973-81	RES, CHIP	47K	5%	1/16W
R760	1-218-942-81	RES, CHIP	120	5%	1/16W
R761	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R762	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R763	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R766	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R767	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R768	1-211-896-91	RES, CHIP	0.18	5%	1/10W
R769	1-216-063-91	RES, CHIP	3.9K	5%	1/10W
R770	1-218-973-81	RES, CHIP	47K	5%	1/16W
R772	1-218-973-81	RES, CHIP	47K	5%	1/16W
R780	1-216-200-91	RES, CHIP	1.2K	5%	1/8W
R781	1-218-873-91	RES, CHIP	12K	0.50%	1/16W
R782	1-218-887-91	RES, CHIP	47K	0.50%	1/16W
R783	1-218-863-91	RES, CHIP	4.7K	0.50%	1/16W
R784	1-218-863-91	RES, CHIP	4.7K	0.50%	1/16W
R785	1-216-200-91	RES, CHIP	1.2K	5%	1/8W
R786	1-218-973-81	RES, CHIP	47K	5%	1/16W
R787	1-218-973-81	RES, CHIP	47K	5%	1/16W
R788	1-218-973-81	RES, CHIP	47K	5%	1/16W
R789	1-218-973-81	RES, CHIP	47K	5%	1/16W
R790	1-218-973-81	RES, CHIP	47K	5%	1/16W
R791	1-218-973-81	RES, CHIP	47K	5%	1/16W
R792	1-218-973-81	RES, CHIP	47K	5%	1/16W
R793	1-218-973-81	RES, CHIP	47K	5%	1/16W
R794	1-216-041-91	RES, CHIP	470	5%	1/10W
R795	1-216-041-91	RES, CHIP	470	5%	1/10W
R796	1-218-867-91	RES, CHIP	6.8K	5%	1/16W
R797	1-218-887-91	RES, CHIP	47K	0.50%	1/16W
R798	1-218-887-91	RES, CHIP	47K	0.50%	1/16W
R799	1-218-847-91	RES, CHIP	1K	0.50%	1/10W
		< TRANSFORMER >			
T701	1-431-942-21	TRANSFORMER, DC-DC CONVERTER			
T702	1-431-980-21	TRANSFORMER, DC-DC CONVERTER			
**********					
	A-8054-850-A	JK-136 BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN1401	1-779-884-21	CONNECTOR 4P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D1401	8-719-062-16	DIODE 01ZA8.2 (TPL3)			
D1402	8-719-062-16	DIODE 01ZA8.2 (TPL3)			
D1403	8-719-422-86	DIODE MA8082-L-TX			
		< FERRITE BEAD >			
FB1401	1-414-385-21	INDUCTOR CHIP 0uH			
FB1402	1-414-385-21	INDUCTOR CHIP 0uH			
FB1404	1-414-385-21	INDUCTOR CHIP 0uH			
		< CONNECTOR >			
J1401	1-566-850-41	CONNECTOR, (S) TERMINAL 4P (S VIDEO)			
		< RESISTOR >			
R1401	1-218-285-91	RES, CHIP	75	5%	1/16W
R1402	1-218-936-81	RES, CHIP	39	5%	1/16W
R1403	1-218-936-81	RES, CHIP	39	5%	1/16W
R1404	1-218-948-81	RES, CHIP	390	5%	1/16W
R1405	1-216-295-91	SHORT	0		
**********					
	A-7073-586-A	LC-61 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C801	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C802	1-113-985-91	TANTAL. CHIP	10uF	20%	20V
C803	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C804	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C805	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C806	1-164-874-81	CERAMIC CHIP	100PF	5%	16V
C807	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C808	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C809	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C810	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C811	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C812	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C813	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C814	1-164-939-81	CERAMIC CHIP	0.0022uF	10%	16V
C815	1-113-985-91	TANTAL. CHIP	10uF	20%	20V
C816	1-164-882-81	CERAMIC CHIP	220PF	5%	16V
C817	1-127-692-91	CERAMIC CHIP	10uF		
C818	1-127-692-91	CERAMIC CHIP	10uF		
		< CONNECTOR >			
CN801	1-573-346-21	CONNECTOR, FFC/FPC 6P			
CN802	1-573-346-21	CONNECTOR, FFC/FPC 6P			
CN803	1-750-335-21	CONNECTOR, FFC/FPC (ZIF) 8P			
CN804	1-784-423-21	CONNECTOR, FFC/FPC (ZIF) 39P			
CN805	1-784-423-21	CONNECTOR, FFC/FPC (ZIF) 39P			
CN806	1-785-039-21	CONNECTOR (COAXIAL HARNESS) 50P			
		< DIODE >			
D801	8-719-066-17	DIODE FTZ6.8E-T148			
D802	8-719-066-17	DIODE FTZ6.8E-T148			

Ref. No.	Part No.	Description	Remark
		< FERRITE BEAD >	
FB801	1-500-329-21	INDUCTOR CHIP 0uH	
FB802	1-500-329-21	INDUCTOR CHIP 0uH	
FB803	1-500-329-21	INDUCTOR CHIP 0uH	
FB804	1-500-329-21	INDUCTOR CHIP 0uH	
FB805	1-500-329-21	INDUCTOR CHIP 0uH	
FB806	1-500-329-21	INDUCTOR CHIP 0uH	
FB807	1-500-329-21	INDUCTOR CHIP 0uH	
FB808	1-500-329-21	INDUCTOR CHIP 0uH	
FB809	1-500-329-21	INDUCTOR CHIP 0uH	
FB810	1-500-329-21	INDUCTOR CHIP 0uH	
		< FILTER >	
FL801	1-234-107-21	FILTER, EMI	
FL802	1-234-107-21	FILTER, EMI	
FL803	1-234-107-21	FILTER, EMI	
FL804	1-234-107-21	FILTER, EMI	
FL805	1-234-107-21	FILTER, EMI	
FL806	1-234-107-21	FILTER, EMI	
FL807	1-234-107-21	FILTER, EMI	
FL808	1-234-107-21	FILTER, EMI	
FL809	1-234-107-21	FILTER, EMI	
FL810	1-234-107-21	FILTER, EMI	
FL811	1-234-107-21	FILTER, EMI	
FL812	1-234-107-21	FILTER, EMI	
FL813	1-234-107-21	FILTER, EMI	
FL814	1-234-107-21	FILTER, EMI	
FL815	1-234-107-21	FILTER, EMI	
FL816	1-234-107-21	FILTER, EMI	
FL817	1-234-107-21	FILTER, EMI	
FL818	1-234-107-21	FILTER, EMI	
FL819	1-234-107-21	FILTER, EMI	
FL820	1-234-107-21	FILTER, EMI	
FL821	1-234-107-21	FILTER, EMI	
FL822	1-234-107-21	FILTER, EMI	
FL823	1-234-107-21	FILTER, EMI	
FL824	1-234-107-21	FILTER, EMI	
FL825	1-234-107-21	FILTER, EMI	
FL826	1-234-107-21	FILTER, EMI	
FL827	1-234-107-21	FILTER, EMI	
FL828	1-234-107-21	FILTER, EMI	
FL829	1-234-107-21	FILTER, EMI	
FL830	1-234-107-21	FILTER, EMI	
FL831	1-234-107-21	FILTER, EMI	
FL832	1-234-107-21	FILTER, EMI	
FL833	1-234-107-21	FILTER, EMI	
FL834	1-234-107-21	FILTER, EMI	
FL835	1-234-107-21	FILTER, EMI	
FL836	1-234-107-21	FILTER, EMI	
FL837	1-234-107-21	FILTER, EMI	
FL838	1-234-107-21	FILTER, EMI	
FL839	1-234-107-21	FILTER, EMI	
		< IC >	
IC801	8-759-337-41	IC NJM2902V (TE2)	

Ref. No.	Part No.	Description			Remark
		< COIL >			
L801	1-414-754-91	INDUCTOR 10uH			
		< TRANSISTOR >			
Q801	8-729-420-29	TRANSISTOR 2SD1819A-QRS-TX			
Q802	8-729-420-29	TRANSISTOR 2SD1819A-QRS-TX			
Q803	8-729-420-29	TRANSISTOR 2SD1819A-QRS-TX			
		< RESISTOR >			
R801	1-218-977-81	RES, CHIP	100K	5%	1/16W
R802	1-218-968-81	RES, CHIP	18K	5%	1/16W
R803	1-218-969-81	RES, CHIP	22K	5%	1/16W
R804	1-218-969-81	RES, CHIP	22K	5%	1/16W
R805	1-218-965-81	RES, CHIP	10K	5%	1/16W
R806	1-218-965-81	RES, CHIP	10K	5%	1/16W
R807	1-218-981-81	RES, CHIP	220K	5%	1/16W
R808	1-218-977-81	RES, CHIP	100K	5%	1/16W
R809	1-218-977-81	RES, CHIP	100K	5%	1/16W
R811	1-218-969-81	RES, CHIP	22K	5%	1/16W
R812	1-218-973-81	RES, CHIP	47K	5%	1/16W
R813	1-218-973-81	RES, CHIP	47K	5%	1/16W
R814	1-218-973-81	RES, CHIP	47K	5%	1/16W
R815	1-218-989-81	RES, CHIP	1M	5%	1/16W
R816	1-218-989-81	RES, CHIP	1M	5%	1/16W
R817	1-218-989-81	RES, CHIP	1M	5%	1/16W
R818	1-218-977-81	RES, CHIP	100K	5%	1/16W
R819	1-218-965-81	RES, CHIP	10K	5%	1/16W
R820	1-218-977-81	RES, CHIP	100K	5%	1/16W
R821	1-218-977-81	RES, CHIP	100K	5%	1/16W
R822	1-218-965-81	RES, CHIP	10K	5%	1/16W
R825	1-216-037-91	RES, CHIP	330	5%	1/10W
R852	1-216-864-91	SHORT	0		
R859	1-218-990-81	SHORT	0		
R861	1-218-990-81	SHORT	0		
**********					
	A-8054-845-A	MA-324 BOARD, COMPLETE			
		**********			
	X-3948-754-1	CASE (UPPER) ASSY, MA SHIELD			
	1-670-350-11	FP-662 FLEXIBLE BOARD			
	1-783-673-11	CABLE, CONNECTION			
	3-050-083-01	CASE (LOWER) , MA SHIELD			
	3-050-102-01	SHEET (A), MA RADIATION			
	3-050-336-01	SHEET (B), MA RADIATION			
	3-719-381-31	SCREW (M2X3)			
		< CAPACITOR >			
C101	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C102	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C111	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C112	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C113	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C114	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C115	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C116	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C121	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C122	1-164-947-81	CERAMIC CHIP	0.01uF		16V

Ref. No.	Part No.	Description			Remark
C123	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C124	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C125	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C131	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C132	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C133	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C134	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C135	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C136	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C137	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C138	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C139	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C140	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C141	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C142	1-110-569-91	TANTAL. CHIP	47uF	20%	6.3V
C143	1-164-935-81	CERAMIC CHIP	470PF	10%	16V
C144	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C145	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C146	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C147	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C151	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C152	1-164-222-91	CERAMIC CHIP	0.22uF		25V
C156	1-164-222-91	CERAMIC CHIP	0.22uF		25V
C158	1-104-847-91	TANTAL. CHIP	22uF	20%	4V
C159	1-164-346-91	CERAMIC CHIP	1uF		16V
C160	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C161	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C162	1-162-964-91	CERAMIC CHIP	0.001uF	10%	50V
C163	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C164	1-164-346-91	CERAMIC CHIP	1uF		16V
C165	1-135-150-91	TANTAL. CHIP	3.3uF	20%	6.3V
C166	1-164-346-91	CERAMIC CHIP	1uF		16V
C167	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C168	1-164-346-91	CERAMIC CHIP	1uF		16V
C169	1-165-319-91	CERAMIC CHIP	0.1uF		50V
C170	1-111-253-91	TANTAL. CHIP	100uF	20%	6.3V
C171	1-164-390-91	CERAMIC CHIP	330PF	5%	50V
C172	1-164-390-91	CERAMIC CHIP	330PF	5%	50V
C191	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C201	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C202	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C203	1-104-852-91	TANTAL. CHIP	22uF	20%	10V
C204	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C205	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C206	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C207	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C208	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C209	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C210	1-104-913-91	TANTAL. CHIP	10uF	20%	16V
C216	1-104-852-91	TANTAL. CHIP	22uF	20%	10V
C217	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C218	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C219	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C220	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C221	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C223	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C224	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C225	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C227	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C228	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C229	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C231	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C232	1-104-914-91	TANTAL. CHIP	22uF	20%	16V
C233	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C234	1-104-914-91	TANTAL. CHIP	22uF	20%	16V
C235	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C236	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C237	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C239	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C240	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C241	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C242	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C243	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C244	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C245	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C246	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C247	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C250	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C251	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C252	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C253	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C254	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C255	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C256	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C257	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C258	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C261	1-113-981-91	TANTAL. CHIP	22uF	20%	20V
C262	1-165-319-91	CERAMIC CHIP	0.1uF		50V
C267	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C268	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C269	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C270	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C271	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C272	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C273	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C274	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C275	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C276	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C277	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C278	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C279	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C280	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C281	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C282	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C283	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C284	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C285	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C286	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C287	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C288	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C301	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C302	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C303	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C304	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C305	1-107-820-81	CERAMIC CHIP	0.1uF		16V

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Ref. No.	Part No.	Description			Remark
C306	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C307	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C308	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C310	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C311	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C312	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C313	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C314	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C315	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C316	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C317	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C318	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C319	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C320	1-164-874-81	CERAMIC CHIP	100PF	5%	16V
C321	1-110-501-91	CERAMIC CHIP	0.33uF	10%	16V
C322	1-164-730-91	CERAMIC CHIP	0.0012uF	10%	50V
C330	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C331	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C401	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C402	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C403	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C404	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C407	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C408	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C448	1-164-489-91	CERAMIC CHIP	0.22uF	10%	16V
C449	1-135-087-91	TANTAL. CHIP	0.68uF	20%	20V
C450	1-164-346-91	CERAMIC CHIP	1uF		16V
C451	1-164-489-91	CERAMIC CHIP	0.22uF	10%	16V
C452	1-164-489-91	CERAMIC CHIP	0.22uF	10%	16V
C453	1-164-739-91	CERAMIC CHIP	560PF	5%	50V
C454	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C455	1-164-940-81	CERAMIC CHIP	0.0033uF	10%	16V
C456	1-104-913-91	TANTAL. CHIP	10uF	20%	16V
C457	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C458	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C459	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C460	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C461	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C462	1-164-473-91	CERAMIC CHIP	820PF	5%	50V
C463	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C465	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C467	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C468	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C469	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C501	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C502	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C507	1-164-939-81	CERAMIC CHIP	0.0022uF	10%	16V
C511	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C512	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C513	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C514	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C515	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C516	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C517	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C518	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C519	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C520	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C521	1-164-858-81	CERAMIC CHIP	22PF	5%	16V

Ref. No.	Part No.	Description			Remark
C522	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C523	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C524	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C525	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C526	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C528	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C530	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C531	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C532	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C533	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C535	1-107-819-81	CERAMIC CHIP	0.022uF	10%	16V
C536	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C537	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C541	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C542	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C543	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C544	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C545	1-164-862-81	CERAMIC CHIP	33PF	5%	16V
C546	1-164-856-81	CERAMIC CHIP	18PF	5%	16V
C547	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C549	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C551	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C552	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C553	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C554	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C555	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C556	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C557	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C558	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C559	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C560	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C561	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C562	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C563	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C564	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C565	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C566	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C567	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C568	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C569	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C570	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C571	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C572	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C573	1-164-346-91	CERAMIC CHIP	1uF		16V
C574	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C575	1-135-181-91	TANTAL. CHIP	4.7uF	20%	6.3V
C576	1-135-150-91	TANTAL. CHIP	3.3uF	20%	6.3V
C577	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C578	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C579	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C580	1-135-181-91	TANTAL. CHIP	4.7uF	20%	6.3V
C581	1-164-489-91	CERAMIC CHIP	0.22uF	10%	16V
C582	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C583	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C585	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C586	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C587	1-164-858-81	CERAMIC CHIP	22PF	5%	16V

Ref. No.	Part No.	Description			Remark
C589	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C590	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C591	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C592	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C593	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C594	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C595	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C597	1-107-820-81	CERAMIC CHIP	0.1uF		16V
C598	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C931	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C932	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C933	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C934	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C935	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C936	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C937	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C938	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C939	1-164-858-81	CERAMIC CHIP	22PF	5%	16V
C940	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C941	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C942	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C946	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C947	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C948	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C971	1-162-974-91	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN101	1-573-924-21	CONNECTOR, FFC/FPC (ZIF) 15P			
CN102	1-750-345-21	CONNECTOR, FFC/EPC (ZIF) 30P			
CN103	1-750-345-21	CONNECTOR, FFC/EPC (ZIF) 30P			
CN201	1-785-039-21	CONNECTOR (COAXIAL HARNESS) 50P			
CN205	1-770-620-21	PIN, CONNECTOR 3P			
CN206	1-573-525-21	CONNECTOR, BOARD TO BOARD 16P			
CN501	1-691-550-21	PIN, CONNECTOR (1.5mm) (SMD) 3P			
		< DIODE >			
D101	8-719-066-47	DIODE MA4Z082WA- (K8).SO			
D102	8-719-066-47	DIODE MA4Z082WA- (K8).SO			
D103	8-719-066-47	DIODE MA4Z082WA- (K8).SO			
D104	8-719-422-86	DIODE MA8082-L-TX			
D105	8-719-422-86	DIODE MA8082-L-TX			
D111	8-719-404-50	DIODE MA111-TX			
D112	8-719-404-50	DIODE MA111-TX			
D113	8-719-404-50	DIODE MA111-TX			
D114	8-719-404-50	DIODE MA111-TX			
D501	8-719-941-21	DIODE DAP202UT106			
D503	8-719-017-13	DIODE 02DZ7.5-TPH3			
D504	8-719-017-13	DIODE 02DZ7.5-TPH3			
		< FERRITE BEAD >			
FB201	1-500-329-21	INDUCTOR CHIP 0uH			
FB202	1-500-329-21	INDUCTOR CHIP 0uH			
FB203	1-500-329-21	INDUCTOR CHIP 0uH			
FB204	1-500-329-21	INDUCTOR CHIP 0uH			
FB205	1-500-329-21	INDUCTOR CHIP 0uH			
FB206	1-500-329-21	INDUCTOR CHIP 0uH			
FB207	1-500-329-21	INDUCTOR CHIP 0uH			
FB208	1-500-329-21	INDUCTOR CHIP 0uH			
FB209	1-500-329-21	INDUCTOR CHIP 0uH			
FB210	1-500-329-21	INDUCTOR CHIP 0uH			
FB252	1-216-295-91	SHORT 0			
FB256	1-500-329-21	INDUCTOR CHIP 0uH			
FB257	1-414-671-21	INDUCTOR CHIP 0uH			
FB258	1-414-671-21	INDUCTOR CHIP 0uH			
FB301	1-500-329-21	INDUCTOR CHIP 0uH			
FB302	1-500-329-21	INDUCTOR CHIP 0uH			
FB303	1-500-329-21	INDUCTOR CHIP 0uH			
FB304	1-500-329-21	INDUCTOR CHIP 0uH			
FB305	1-500-329-21	INDUCTOR CHIP 0uH			
FB306	1-500-329-21	INDUCTOR CHIP 0uH			
FB307	1-500-329-21	INDUCTOR CHIP 0uH			
FB308	1-500-329-21	INDUCTOR CHIP 0uH			
FB309	1-500-329-21	INDUCTOR CHIP 0uH			
FB310	1-500-329-21	INDUCTOR CHIP 0uH			
FB311	1-500-329-21	INDUCTOR CHIP 0uH			
FB312	1-500-329-21	INDUCTOR CHIP 0uH			
FB313	1-500-329-21	INDUCTOR CHIP 0uH			
FB314	1-500-329-21	INDUCTOR CHIP 0uH			
FB321	1-500-329-21	INDUCTOR CHIP 0uH			
FB322	1-500-329-21	INDUCTOR CHIP 0uH			
FB323	1-500-329-21	INDUCTOR CHIP 0uH			
FB324	1-500-329-21	INDUCTOR CHIP 0uH			
FB325	1-500-329-21	INDUCTOR CHIP 0uH			
FB326	1-500-329-21	INDUCTOR CHIP 0uH			
FB327	1-500-329-21	INDUCTOR CHIP 0uH			
FB328	1-500-329-21	INDUCTOR CHIP 0uH			
FB329	1-500-329-21	INDUCTOR CHIP 0uH			
FB330	1-500-329-21	INDUCTOR CHIP 0uH			
FB331	1-500-329-21	INDUCTOR CHIP 0uH			
FB332	1-500-329-21	INDUCTOR CHIP 0uH			
FB333	1-500-329-21	INDUCTOR CHIP 0uH			
FB334	1-500-329-21	INDUCTOR CHIP 0uH			
FB335	1-414-385-21	INDUCTOR CHIP 0uH			
FB336	1-414-385-21	INDUCTOR CHIP 0uH			
FB337	1-500-329-21	INDUCTOR CHIP 0uH			
FB338	1-500-329-21	INDUCTOR CHIP 0uH			
FB340	1-414-671-21	INDUCTOR CHIP 0uH			
FB341	1-414-671-21	INDUCTOR CHIP 0uH			
FB342	1-500-329-21	INDUCTOR CHIP 0uH			
FB343	1-500-329-21	INDUCTOR CHIP 0uH			
FB344	1-500-329-21	INDUCTOR CHIP 0uH			
FB345	1-500-329-21	INDUCTOR CHIP 0uH			
FB346	1-500-329-21	INDUCTOR CHIP 0uH			
FB347	1-500-329-21	INDUCTOR CHIP 0uH			
FB348	1-500-329-21	INDUCTOR CHIP 0uH			
FB349	1-500-329-21	INDUCTOR CHIP 0uH			
FB350	1-500-329-21	INDUCTOR CHIP 0uH			
FB351	1-500-329-21	INDUCTOR CHIP 0uH			
FB361	1-500-329-21	INDUCTOR CHIP 0uH			
FB362	1-500-329-21	INDUCTOR CHIP 0uH			
FB363	1-500-329-21	INDUCTOR CHIP 0uH			
FB364	1-500-329-21	INDUCTOR CHIP 0uH			
FB365	1-500-329-21	INDUCTOR CHIP 0uH			

Ref. No.	Part No.	Description	Remark
		< FILTER >	
FL101	1-234-107-21	FILTER, EMI	
FL102	1-234-107-21	FILTER, EMI	
FL103	1-234-107-21	FILTER, EMI	
FL104	1-234-107-21	FILTER, EMI	
FL105	1-234-107-21	FILTER, EMI	
FL163	1-234-107-21	FILTER, EMI	
FL164	1-234-107-21	FILTER, EMI	
FL165	1-234-107-21	FILTER, EMI	
FL171	1-234-107-21	FILTER, EMI	
FL172	1-234-207-21	FILTER, EMI	
FL173	1-234-107-21	FILTER, EMI	
FL174	1-234-207-21	FILTER, EMI	
FL182	1-234-108-21	FILTER, EMI	
FL183	1-234-108-21	FILTER, EMI	
FL185	1-234-108-21	FILTER, EMI	
FL188	1-234-108-21	FILTER, EMI	
FL201	1-234-108-21	FILTER, EMI	
FL202	1-234-108-21	FILTER, EMI	
FL203	1-234-107-21	FILTER, EMI	
FL204	1-234-107-21	FILTER, EMI	
FL205	1-234-107-21	FILTER, EMI	
FL206	1-234-107-21	FILTER, EMI	
FL207	1-234-107-21	FILTER, EMI	
FL208	1-234-107-21	FILTER, EMI	
FL209	1-234-107-21	FILTER, EMI	
FL210	1-234-107-21	FILTER, EMI	
FL211	1-234-107-21	FILTER, EMI	
FL212	1-234-107-21	FILTER, EMI	
FL213	1-234-107-21	FILTER, EMI	
FL214	1-234-107-21	FILTER, EMI	
FL215	1-234-107-21	FILTER, EMI	
FL216	1-234-107-21	FILTER, EMI	
FL217	1-234-107-21	FILTER, EMI	
FL218	1-234-107-21	FILTER, EMI	
FL219	1-234-107-21	FILTER, EMI	
FL220	1-234-107-21	FILTER, EMI	
FL221	1-234-107-21	FILTER, EMI	
FL222	1-234-107-21	FILTER, EMI	
FL223	1-234-107-21	FILTER, EMI	
FL224	1-234-108-21	FILTER, EMI	
FL225	1-234-107-21	FILTER, EMI	
FL260	1-234-108-21	FILTER, EMI	
FL301	1-234-107-21	FILTER, EMI	
FL302	1-234-107-21	FILTER, EMI	
FL304	1-234-107-21	FILTER, EMI	
FL305	1-234-107-21	FILTER, EMI	
FL307	1-234-107-21	FILTER, EMI	
FL308	1-234-107-21	FILTER, EMI	
FL313	1-234-107-21	FILTER, EMI	
FL314	1-234-107-21	FILTER, EMI	
		< IC >	
IC131	8-759-360-07	IC BA7657F-E2	
IC132	8-759-443-08	IC TC7W241FU-TE12R	
IC133	8-759-443-08	IC TC7W241FU-TE12R	
IC151	8-759-482-30	IC BA3574BFS-E2	
IC201	1-803-175-11	IC TGA-A2111HF	
IC202	1-803-174-11	IC TGA-A2112HF	
IC203	1-803-174-11	IC TGA-A2112HF	
IC204	1-803-174-11	IC TGA-A2112HF	
IC205	8-759-064-35	IC MB88346BPFV-EF	
IC206	8-759-064-35	IC MB88346BPFV-EF	
IC207	8-759-298-00	IC M62359FP-650D	
IC301	1-803-176-11	IC TGA-D2442HA	
IC302	8-752-086-22	IC CXA3106Q-T6	
IC303	8-759-079-49	IC TC74VHC04FS (EL)	
IC304	8-759-079-73	IC TC74VHC153FS (EL)	
IC401	8-759-540-00	IC MB90096PF-G-150-BND	
IC443	8-752-085-96	IC CXA1616N-T4	
IC445	8-759-296-40	IC TLC555CPS-E20	
IC446	8-759-058-57	IC TC7S04FU-TE85L	
IC447	8-759-443-08	IC TC7W241FU-TE12R	
IC451	8-759-443-08	IC TC7W241FU-TE12R	
IC452	8-759-083-95	IC TC7W74FU (TE12R)	
IC453	8-759-392-01	IC TC7SH86FU-TE85R	
IC501	8-759-540-01	IC S579186PZ-TEB	
IC502	8-759-365-53	IC S-29L353AFS-TB	
IC503	8-759-512-70	IC S-81350HG-KD-T1	
IC504	8-759-510-62	IC S-80735AL-AZ-T1	
IC505	8-759-338-95	IC NJM2903V (TE2)	
IC506	8-759-337-40	IC NJM2904V (TE2)	
IC507	8-759-064-35	IC MB88346BPFV-EF	
IC508	8-759-079-75	IC TC74VHC161FS (EL)	
IC931	8-759-287-55	IC TC7S66FU (TE85R)	
IC932	8-759-287-55	IC TC7S66FU (TE85R)	
IC933	8-759-287-55	IC TC7S66FU (TE85R)	
IC934	8-759-196-97	IC TC7SH32FU-TE85R	
IC935	8-759-287-55	IC TC7S66FU (TE85R)	
IC936	8-759-287-55	IC TC7S66FU (TE85R)	
IC937	8-759-287-55	IC TC7S66FU (TE85R)	
		< CONNECTOR >	
J101	1-785-038-11	CONNECTOR, D-SUB 15P (RGB)	
		< COIL >	
L101	1-414-754-21	INDUCTOR 10uH	
L111	1-414-754-21	INDUCTOR 10uH	
L131	1-414-754-21	INDUCTOR 10uH	
L132	1-414-754-21	INDUCTOR 10uH	
L151	1-412-058-21	INDUCTOR CHIP 10uH	
L201	1-414-754-21	INDUCTOR 10uH	
L202	1-414-754-21	INDUCTOR 10uH	
L203	1-414-754-21	INDUCTOR 10uH	
L204	1-414-754-21	INDUCTOR 10uH	
L205	1-414-410-21	INDUCTOR 10uH	
L206	1-414-754-21	INDUCTOR 10uH	
L207	1-414-754-21	INDUCTOR 10uH	
L208	1-414-754-21	INDUCTOR 10uH	
L209	1-414-754-21	INDUCTOR 10uH	
L301	1-414-754-21	INDUCTOR 10uH	
L302	1-414-754-21	INDUCTOR 10uH	
L401	1-414-754-21	INDUCTOR 10uH	
L402	1-414-754-21	INDUCTOR 10uH	
L442	1-414-754-21	INDUCTOR 10uH	
L443	1-414-754-21	INDUCTOR 10uH	

Ref. No.	Part No.	Description			Remark
L501	1-414-081-21	INDUCTOR	33uH		
L502	1-414-754-21	INDUCTOR	10uH		
L503	1-414-754-21	INDUCTOR	10uH		
		< IC LINK >			
PS501	1-576-123-21	LINK, IC			
		< TRANSISTOR >			
Q153	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q154	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q156	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q191	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q192	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q193	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q201	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q202	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q203	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q204	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q205	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q206	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q207	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q208	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q209	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q210	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q211	8-729-928-05	TRANSISTOR	2SC4617TL-QR		
Q212	8-729-928-25	TRANSISTOR	2SA1774TL-QR		
Q501	8-729-029-14	TRANSISTOR	DTC144EUA-T106		
Q502	8-729-420-13	TRANSISTOR	XN4213-TW		
Q503	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8)		
Q504	8-729-822-05	TRANSISTOR	2SD1622-ST-TD		
Q931	8-729-427-73	TRANSISTOR	XP4501-TXE		
Q932	8-729-427-73	TRANSISTOR	XP4501-TXE		
Q933	8-729-427-73	TRANSISTOR	XP4501-TXE		
Q934	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q935	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q936	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q937	8-729-429-69	TRANSISTOR	2SA1791- (TX) -Q		
Q938	8-729-429-69	TRANSISTOR	2SA1791- (TX) -Q		
Q939	8-729-429-69	TRANSISTOR	2SA1791- (TX) -Q		
Q940	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q941	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q942	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q943	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q944	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q945	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q946	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q947	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q948	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q949	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q950	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
Q951	8-729-043-40	TRANSISTOR	2SC4627J-C (K8).SO		
		< RESISTOR >			
R101	1-216-295-91	SHORT	0		
R102	1-216-295-91	SHORT	0		
R103	1-216-295-91	SHORT	0		
R104	1-216-295-91	SHORT	0		
R106	1-211-990-91	RES, CHIP	75	0.50%	1/16W
R107	1-211-990-91	RES, CHIP	75	0.50%	1/16W
R108	1-211-990-91	RES, CHIP	75	0.50%	1/16W
R111	1-216-295-91	SHORT	0		
R112	1-216-295-91	SHORT	0		
R113	1-218-941-81	RES, CHIP	100	5%	1/16W
R114	1-218-941-81	RES, CHIP	100	5%	1/16W
R131	1-218-985-81	RES, CHIP	470K	5%	1/16W
R132	1-218-929-81	RES, CHIP	10	5%	1/16W
R133	1-218-929-81	RES, CHIP	10	5%	1/16W
R134	1-218-929-81	RES, CHIP	10	5%	1/16W
R152	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R155	1-218-990-81	SHORT	0		
R156	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R157	1-218-990-81	SHORT	0		
R158	1-218-990-81	SHORT	0		
R163	1-218-963-81	RES, CHIP	6.8K	5%	1/16W
R164	1-216-295-91	SHORT	0		
R165	1-218-990-81	SHORT	0		
R170	1-218-977-81	RES, CHIP	100K	5%	1/16W
R171	1-218-971-81	RES, CHIP	33K	5%	1/16W
R172	1-218-989-81	RES, CHIP	1M	5%	1/16W
R191	1-218-961-81	RES, CHIP	4.7K	5%	1/16W
R192	1-218-966-81	RES, CHIP	12K	5%	1/16W
R193	1-218-965-81	RES, CHIP	10K	5%	1/16W
R195	1-218-965-81	RES, CHIP	10K	5%	1/16W
R201	1-218-929-81	RES, CHIP	10	5%	1/16W
R202	1-218-929-81	RES, CHIP	10	5%	1/16W
R203	1-218-929-81	RES, CHIP	10	5%	1/16W
R204	1-218-929-81	RES, CHIP	10	5%	1/16W
R205	1-218-929-81	RES, CHIP	10	5%	1/16W
R206	1-218-929-81	RES, CHIP	10	5%	1/16W
R207	1-218-929-81	RES, CHIP	10	5%	1/16W
R209	1-218-929-81	RES, CHIP	10	5%	1/16W
R212	1-218-965-81	RES, CHIP	10K	5%	1/16W
R213	1-218-990-81	SHORT	0		
R214	1-218-990-81	SHORT	0		
R215	1-218-990-81	SHORT	0		
R216	1-218-929-81	RES, CHIP	10	5%	1/16W
R217	1-218-965-81	RES, CHIP	10K	5%	1/16W
R219	1-218-929-81	RES, CHIP	10	5%	1/16W
R220	1-218-929-81	RES, CHIP	10	5%	1/16W
R221	1-218-929-81	RES, CHIP	10	5%	1/16W
R222	1-218-929-81	RES, CHIP	10	5%	1/16W
R223	1-218-929-81	RES, CHIP	10	5%	1/16W
R225	1-218-929-81	RES, CHIP	10	5%	1/16W
R226	1-218-929-81	RES, CHIP	10	5%	1/16W
R227	1-218-929-81	RES, CHIP	10	5%	1/16W
R228	1-218-929-81	RES, CHIP	10	5%	1/16W
R229	1-218-929-81	RES, CHIP	10	5%	1/16W
R230	1-218-929-81	RES, CHIP	10	5%	1/16W
R231	1-218-929-81	RES, CHIP	10	5%	1/16W
R232	1-218-929-81	RES, CHIP	10	5%	1/16W
R233	1-218-929-81	RES, CHIP	10	5%	1/16W
R236	1-218-929-81	RES, CHIP	10	5%	1/16W
R237	1-218-929-81	RES, CHIP	10	5%	1/16W
R238	1-218-929-81	RES, CHIP	10	5%	1/16W
R239	1-218-929-81	RES, CHIP	10	5%	1/16W
R246	1-218-929-81	RES, CHIP	10	5%	1/16W

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Ref. No.	Part No.	Description			Remark
R247	1-218-929-81	RES, CHIP	10	5%	1/16W
R248	1-218-929-81	RES, CHIP	10	5%	1/16W
R249	1-218-929-81	RES, CHIP	10	5%	1/16W
R250	1-218-929-81	RES, CHIP	10	5%	1/16W
R251	1-211-969-91	RES, CHIP	10	0.50%	1/16W
R252	1-211-969-91	RES, CHIP	10	0.50%	1/16W
R253	1-218-929-81	RES, CHIP	10	5%	1/16W
R254	1-218-929-81	RES, CHIP	10	5%	1/16W
R259	1-218-965-81	RES, CHIP	10K	5%	1/16W
R260	1-218-965-81	RES, CHIP	10K	5%	1/16W
R261	1-218-934-81	RES, CHIP	27	5%	1/16W
R262	1-218-934-81	RES, CHIP	27	5%	1/16W
R263	1-218-934-81	RES, CHIP	27	5%	1/16W
R264	1-218-933-81	RES, CHIP	22	5%	1/16W
R265	1-218-932-81	RES, CHIP	18	5%	1/16W
R266	1-218-931-81	RES, CHIP	15	5%	1/16W
R267	1-218-881-91	RES, CHIP	27K	0.50%	1/16W
R270	1-218-965-81	RES, CHIP	10K	5%	1/16W
R271	1-218-965-81	RES, CHIP	10K	5%	1/16W
R272	1-218-934-81	RES, CHIP	27	5%	1/16W
R273	1-218-934-81	RES, CHIP	27	5%	1/16W
R274	1-218-934-81	RES, CHIP	27	5%	1/16W
R275	1-218-933-81	RES, CHIP	22	5%	1/16W
R276	1-218-932-81	RES, CHIP	18	5%	1/16W
R277	1-218-931-81	RES, CHIP	15	5%	1/16W
R278	1-218-881-91	RES, CHIP	27K	0.50%	1/16W
R281	1-218-965-81	RES, CHIP	10K	5%	1/16W
R282	1-218-965-81	RES, CHIP	10K	5%	1/16W
R283	1-218-934-81	RES, CHIP	27	5%	1/16W
R284	1-218-934-81	RES, CHIP	27	5%	1/16W
R285	1-218-934-81	RES, CHIP	27	5%	1/16W
R286	1-218-933-81	RES, CHIP	22	5%	1/16W
R287	1-218-932-81	RES, CHIP	18	5%	1/16W
R288	1-218-931-81	RES, CHIP	15	5%	1/16W
R289	1-218-881-91	RES, CHIP	27K	0.50%	1/16W
R301	1-218-990-81	SHORT	0		
R302	1-218-929-81	RES, CHIP	10	5%	1/16W
R303	1-218-929-81	RES, CHIP	10	5%	1/16W
R304	1-218-929-81	RES, CHIP	10	5%	1/16W
R305	1-218-929-81	RES, CHIP	10	5%	1/16W
R306	1-218-965-81	RES, CHIP	10K	5%	1/16W
R307	1-218-929-81	RES, CHIP	10	5%	1/16W
R308	1-218-973-81	RES, CHIP	47K	5%	1/16W
R309	1-218-929-81	RES, CHIP	10	5%	1/16W
R310	1-218-929-81	RES, CHIP	10	5%	1/16W
R311	1-218-929-81	RES, CHIP	10	5%	1/16W
R312	1-218-929-81	RES, CHIP	10	5%	1/16W
R313	1-218-929-81	RES, CHIP	10	5%	1/16W
R314	1-218-929-81	RES, CHIP	10	5%	1/16W
R315	1-218-990-81	SHORT	0		
R316	1-218-990-81	SHORT	0		
R317	1-218-990-81	SHORT	0		
R318	1-218-929-81	RES, CHIP	10	5%	1/16W
R320	1-218-929-81	RES, CHIP	10	5%	1/16W
R321	1-218-929-81	RES, CHIP	10	5%	1/16W
R322	1-218-929-81	RES, CHIP	10	5%	1/16W
R323	1-218-929-81	RES, CHIP	10	5%	1/16W

Ref. No.	Part No.	Description			Remark
R324	1-218-929-81	RES, CHIP	10	5%	1/16W
R325	1-218-929-81	RES, CHIP	10	5%	1/16W
R326	1-218-965-81	RES, CHIP	10K	5%	1/16W
R327	1-218-990-81	SHORT	0		
R328	1-218-990-81	SHORT	0		
R329	1-218-990-81	SHORT	0		
R330	1-218-990-81	SHORT	0		
R331	1-218-929-81	RES, CHIP	10	5%	1/16W
R332	1-218-929-81	RES, CHIP	10	5%	1/16W
R333	1-218-929-81	RES, CHIP	10	5%	1/16W
R334	1-218-929-81	RES, CHIP	10	5%	1/16W
R335	1-218-990-81	SHORT	0		
R336	1-218-990-81	SHORT	0		
R338	1-218-947-81	RES, CHIP	330	5%	1/16W
R339	1-218-947-81	RES, CHIP	330	5%	1/16W
R340	1-218-852-91	RES, CHIP	1.6K	0.50%	1/16W
R341	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R344	1-218-929-81	RES, CHIP	10	5%	1/16W
R345	1-218-929-81	RES, CHIP	10	5%	1/16W
R346	1-218-929-81	RES, CHIP	10	5%	1/16W
R347	1-216-797-91	RES, CHIP	10	5%	1/16W
R348	1-218-929-81	RES, CHIP	10	5%	1/16W
R349	1-216-797-91	RES, CHIP	10	5%	1/16W
R350	1-218-941-81	RES, CHIP	100	5%	1/16W
R351	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R352	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R353	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R354	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R355	1-218-990-81	SHORT	0		
R356	1-218-941-81	RES, CHIP	100	5%	1/16W
R357	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R358	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R359	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R360	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R361	1-218-990-81	SHORT	0		
R362	1-218-941-81	RES, CHIP	100	5%	1/16W
R363	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R364	1-218-859-91	RES, CHIP	3.3K	0.50%	1/16W
R365	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R366	1-216-789-91	RES, CHIP	2.2	5%	1/16W
R367	1-218-990-81	SHORT	0		
R369	1-218-929-81	RES, CHIP	10	5%	1/16W
R370	1-218-990-81	SHORT	0		
R372	1-218-990-81	SHORT	0		
R374	1-218-990-81	SHORT	0		
R375	1-218-990-81	SHORT	0		
R376	1-218-990-81	SHORT	0		
R377	1-218-990-81	SHORT	0		
R403	1-216-295-91	SHORT	0		
R404	1-218-990-81	SHORT	0		
R407	1-218-990-81	SHORT	0		
R413	1-218-990-81	SHORT	0		
R418	1-218-990-81	SHORT	0		
R419	1-218-990-81	SHORT	0		
R420	1-218-990-81	SHORT	0		
R421	1-218-990-81	SHORT	0		
R422	1-218-990-81	SHORT	0		
R440	1-218-990-81	SHORT	0		

Ref. No.	Part No.	Description			Remark
R448	1-218-941-81	RES, CHIP	100	5%	1/16W
R449	1-218-971-81	RES, CHIP	33K	5%	1/16W
R450	1-218-990-81	SHORT	0		
R451	1-218-966-81	RES, CHIP	12K	5%	1/16W
R452	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R453	1-218-972-81	RES, CHIP	39K	5%	1/16W
R454	1-218-975-81	RES, CHIP	68K	5%	1/16W
R455	1-218-953-81	RES, CHIP	1K	5%	1/16W
R456	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R457	1-218-953-81	RES, CHIP	1K	5%	1/16W
R459	1-218-990-81	SHORT	0		
R463	1-218-965-81	RES, CHIP	10K	5%	1/16W
R485	1-218-990-81	SHORT	0		
R488	1-218-971-81	RES, CHIP	33K	5%	1/16W
R489	1-218-966-81	RES, CHIP	12K	5%	1/16W
R490	1-218-968-81	RES, CHIP	18K	5%	1/16W
R491	1-218-953-81	RES, CHIP	1K	5%	1/16W
R492	1-218-941-81	RES, CHIP	100	5%	1/16W
R501	1-218-990-81	SHORT	0		
R503	1-218-953-81	RES, CHIP	1K	5%	1/16W
R504	1-218-990-81	SHORT	0		
R505	1-218-953-81	RES, CHIP	1K	5%	1/16W
R506	1-218-953-81	RES, CHIP	1K	5%	1/16W
R513	1-218-953-81	RES, CHIP	1K	5%	1/16W
R514	1-218-953-81	RES, CHIP	1K	5%	1/16W
R515	1-218-953-81	RES, CHIP	1K	5%	1/16W
R516	1-218-953-81	RES, CHIP	1K	5%	1/16W
R517	1-218-953-81	RES, CHIP	1K	5%	1/16W
R518	1-218-953-81	RES, CHIP	1K	5%	1/16W
R519	1-218-953-81	RES, CHIP	1K	5%	1/16W
R520	1-218-953-81	RES, CHIP	1K	5%	1/16W
R521	1-218-953-81	RES, CHIP	1K	5%	1/16W
R522	1-218-953-81	RES, CHIP	1K	5%	1/16W
R523	1-218-953-81	RES, CHIP	1K	5%	1/16W
R524	1-218-953-81	RES, CHIP	1K	5%	1/16W
R525	1-218-953-81	RES, CHIP	1K	5%	1/16W
R526	1-218-953-81	RES, CHIP	1K	5%	1/16W
R527	1-218-953-81	RES, CHIP	1K	5%	1/16W
R528	1-218-953-81	RES, CHIP	1K	5%	1/16W
R529	1-218-990-81	SHORT	0		
R530	1-218-953-81	RES, CHIP	1K	5%	1/16W
R531	1-218-990-81	SHORT	0		
R532	1-218-953-81	RES, CHIP	1K	5%	1/16W
R533	1-218-953-81	RES, CHIP	1K	5%	1/16W
R534	1-218-953-81	RES, CHIP	1K	5%	1/16W
R535	1-218-953-81	RES, CHIP	1K	5%	1/16W
R537	1-218-973-81	RES, CHIP	47K	5%	1/16W
R538	1-218-953-81	RES, CHIP	1K	5%	1/16W
R542	1-218-953-81	RES, CHIP	1K	5%	1/16W
R543	1-218-973-81	RES, CHIP	47K	5%	1/16W
R544	1-218-953-81	RES, CHIP	1K	5%	1/16W
R545	1-218-953-81	RES, CHIP	1K	5%	1/16W
R546	1-218-990-81	SHORT	0		
R547	1-219-570-91	RES, CHIP	10M	5%	1/16W
R548	1-218-990-81	SHORT	0		
R549	1-218-990-81	SHORT	0		
R550	1-218-949-81	RES, CHIP	470	5%	1/16W
R551	1-218-953-81	RES, CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R553	1-218-953-81	RES, CHIP	1K	5%	1/16W
R554	1-218-953-81	RES, CHIP	1K	5%	1/16W
R555	1-218-953-81	RES, CHIP	1K	5%	1/16W
R558	1-218-953-81	RES, CHIP	1K	5%	1/16W
R559	1-218-953-81	RES, CHIP	1K	5%	1/16W
R560	1-218-953-81	RES, CHIP	1K	5%	1/16W
R561	1-218-953-81	RES, CHIP	1K	5%	1/16W
R562	1-218-953-81	RES, CHIP	1K	5%	1/16W
R563	1-218-953-81	RES, CHIP	1K	5%	1/16W
R564	1-218-953-81	RES, CHIP	1K	5%	1/16W
R565	1-218-990-81	SHORT	0		
R566	1-218-990-81	SHORT	0		
R570	1-218-953-81	RES, CHIP	1K	5%	1/16W
R571	1-218-953-81	RES, CHIP	1K	5%	1/16W
R572	1-218-953-81	RES, CHIP	1K	5%	1/16W
R573	1-218-953-81	RES, CHIP	1K	5%	1/16W
R574	1-218-953-81	RES, CHIP	1K	5%	1/16W
R575	1-218-953-81	RES, CHIP	1K	5%	1/16W
R576	1-218-953-81	RES, CHIP	1K	5%	1/16W
R577	1-218-953-81	RES, CHIP	1K	5%	1/16W
R578	1-218-953-81	RES, CHIP	1K	5%	1/16W
R579	1-218-953-81	RES, CHIP	1K	5%	1/16W
R580	1-218-953-81	RES, CHIP	1K	5%	1/16W
R581	1-218-953-81	RES, CHIP	1K	5%	1/16W
R582	1-218-953-81	RES, CHIP	1K	5%	1/16W
R583	1-218-953-81	RES, CHIP	1K	5%	1/16W
R584	1-218-953-81	RES, CHIP	1K	5%	1/16W
R585	1-218-953-81	RES, CHIP	1K	5%	1/16W
R586	1-218-953-81	RES, CHIP	1K	5%	1/16W
R587	1-218-953-81	RES, CHIP	1K	5%	1/16W
R588	1-218-953-81	RES, CHIP	1K	5%	1/16W
R589	1-218-953-81	RES, CHIP	1K	5%	1/16W
R590	1-218-990-81	SHORT	0		
R591	1-218-973-81	RES, CHIP	47K	5%	1/16W
R597	1-218-903-91	RES, CHIP	220K	0.50%	1/16W
R598	1-218-911-91	RES, CHIP	470K	0.50%	1/16W
R599	1-218-973-81	RES, CHIP	47K	5%	1/16W
R601	1-218-985-81	RES, CHIP	470K	5%	1/16W
R602	1-218-871-91	RES, CHIP	10K	0.50%	1/16W
R605	1-218-973-81	RES, CHIP	47K	5%	1/16W
R611	1-218-973-81	RES, CHIP	47K	5%	1/16W
R612	1-218-973-81	RES, CHIP	47K	5%	1/16W
R613	1-218-973-81	RES, CHIP	47K	5%	1/16W
R616	1-218-977-81	RES, CHIP	100K	5%	1/16W
R623	1-218-973-81	RES, CHIP	47K	5%	1/16W
R624	1-218-941-81	RES, CHIP	100	5%	1/16W
R629	1-218-985-81	RES, CHIP	470K	5%	1/16W
R631	1-218-990-81	SHORT	0		
R633	1-218-977-81	RES, CHIP	100K	5%	1/16W
R635	1-218-953-81	RES, CHIP	1K	5%	1/16W
R636	1-218-977-81	RES, CHIP	100K	5%	1/16W
R637	1-218-965-81	RES, CHIP	10K	5%	1/16W
R638	1-218-977-81	RES, CHIP	100K	5%	1/16W
R639	1-218-985-81	RES, CHIP	470K	5%	1/16W
R640	1-218-977-81	RES, CHIP	100K	5%	1/16W
R641	1-218-977-81	RES, CHIP	100K	5%	1/16W
R642	1-218-981-81	RES, CHIP	220K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R643	1-218-981-81	RES, CHIP	220K	5%	1/16W
R644	1-218-969-81	RES, CHIP	22K	5%	1/16W
R645	1-218-965-81	RES, CHIP	10K	5%	1/16W
R646	1-218-977-81	RES, CHIP	100K	5%	1/16W
R648	1-218-973-81	RES, CHIP	47K	5%	1/16W
R649	1-218-973-81	RES, CHIP	47K	5%	1/16W
R650	1-218-973-81	RES, CHIP	47K	5%	1/16W
R651	1-218-973-81	RES, CHIP	47K	5%	1/16W
R652	1-218-966-81	RES, CHIP	12K	5%	1/16W
R653	1-218-977-81	RES, CHIP	100K	5%	1/16W
R654	1-216-168-91	RES, CHIP	56	5%	1/8W
R655	1-218-973-81	RES, CHIP	47K	5%	1/16W
R656	1-218-965-81	RES, CHIP	10K	5%	1/16W
R657	1-218-990-81	SHORT	0		
R658	1-216-166-91	RES, CHIP	47	5%	1/8W
R660	1-218-990-81	SHORT	0		
R661	1-218-990-81	SHORT	0		
R662	1-218-990-81	SHORT	0		
R663	1-218-990-81	SHORT	0		
R666	1-218-929-81	RES, CHIP	10	5%	1/16W
R667	1-218-929-81	RES, CHIP	10	5%	1/16W
R671	1-218-929-81	RES, CHIP	10	5%	1/16W
R672	1-218-929-81	RES, CHIP	10	5%	1/16W
R673	1-218-929-81	RES, CHIP	10	5%	1/16W
R674	1-218-973-81	RES, CHIP	47K	5%	1/16W
R675	1-218-973-81	RES, CHIP	47K	5%	1/16W
R676	1-218-973-81	RES, CHIP	47K	5%	1/16W
R677	1-218-973-81	RES, CHIP	47K	5%	1/16W
R678	1-218-973-81	RES, CHIP	47K	5%	1/16W
R679	1-218-977-81	RES, CHIP	100K	5%	1/16W
R680	1-218-929-81	RES, CHIP	10	5%	1/16W
R681	1-218-929-81	RES, CHIP	10	5%	1/16W
R682	1-218-929-81	RES, CHIP	10	5%	1/16W
R684	1-218-965-81	RES, CHIP	10K	5%	1/16W
R685	1-218-990-81	SHORT	0		
R686	1-218-965-81	RES, CHIP	10K	5%	1/16W
R931	1-218-829-91	RES, CHIP	180	0.50%	1/16W
R932	1-218-829-91	RES, CHIP	180	0.50%	1/16W
R933	1-218-829-91	RES, CHIP	180	0.50%	1/16W
R934	1-218-951-81	RES, CHIP	680	5%	1/16W
R935	1-218-949-81	RES, CHIP	470	5%	1/16W
R936	1-218-951-81	RES, CHIP	680	5%	1/16W
R937	1-218-949-81	RES, CHIP	470	5%	1/16W
R938	1-218-951-81	RES, CHIP	680	5%	1/16W
R939	1-218-949-81	RES, CHIP	470	5%	1/16W
R940	1-218-981-81	RES, CHIP	220K	5%	1/16W
R941	1-218-981-81	RES, CHIP	220K	5%	1/16W
R942	1-218-981-81	RES, CHIP	220K	5%	1/16W
R943	1-218-953-81	RES, CHIP	1K	5%	1/16W
R944	1-218-953-81	RES, CHIP	1K	5%	1/16W
R945	1-218-953-81	RES, CHIP	1K	5%	1/16W
R946	1-218-944-81	RES, CHIP	180	5%	1/16W
R947	1-218-944-81	RES, CHIP	180	5%	1/16W
R948	1-218-944-81	RES, CHIP	180	5%	1/16W
R949	1-218-948-81	RES, CHIP	390	5%	1/16W
R950	1-218-948-81	RES, CHIP	390	5%	1/16W
R951	1-218-948-81	RES, CHIP	390	5%	1/16W
R952	1-218-954-81	RES, CHIP	1.2K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R953	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R954	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R955	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R956	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R957	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R958	1-218-929-81	RES, CHIP	10	5%	1/16W
R959	1-218-929-81	RES, CHIP	10	5%	1/16W
R960	1-218-929-81	RES, CHIP	10	5%	1/16W
R961	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R962	1-218-958-81	RES, CHIP	2.7K	5%	1/16W
R963	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R964	1-218-958-81	RES, CHIP	2.7K	5%	1/16W
R965	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R966	1-218-958-81	RES, CHIP	2.7K	5%	1/16W
R967	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R968	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R969	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R970	1-218-990-81	SHORT	0		
R971	1-218-990-81	SHORT	0		
R972	1-218-990-81	SHORT	0		
R976	1-218-990-81	SHORT	0		
R977	1-218-990-81	SHORT	0		
R978	1-218-990-81	SHORT	0		
R980	1-211-983-91	RES, CHIP	39	0.50%	1/16W
R981	1-218-843-91	RES, CHIP	680	0.50%	1/16W
R982	1-211-983-91	RES, CHIP	39	0.50%	1/16W
R983	1-218-843-91	RES, CHIP	680	0.50%	1/16W
R984	1-211-983-91	RES, CHIP	39	0.50%	1/16W
R985	1-218-843-91	RES, CHIP	680	0.50%	1/16W
R989	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R990	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R991	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
		< SWITCH >			
S501	1-571-787-11	SWITCH, TACTILE (PASSWORD RESET)			
		< THERMISTOR >			
TH501	1-810-326-21	THERMISTOR (CHIP TYPE)			
		< VIBRATOR >			
X501	1-767-300-21	VIBRATOR, CRYSTAL (32.768kHz)			
X502	1-579-907-21	VIBRATOR, CERAMIC (20MHz)			
**********					
	A-7073-587-A	SW-306 BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN901	1-764-524-21	CONNECTOR, FFC/FPC (ZIF) 15P			
		< DIODE >			
D901	8-719-054-22	LED SML-020MLTT87 (POWER/POWER SAVING)			
D902	8-719-033-13	LED CL-170Y-CD-T (CHARGE)			
D903	8-719-422-86	DIODE MA8082-L-TX			
D904	8-719-422-86	DIODE MA8082-L-TX			
D905	8-719-422-86	DIODE MA8082-L-TX			

Ref. No.	Part No.	Description			Remark
D906	8-719-422-86	DIODE MA8082-L-TX			
D907	8-719-422-86	DIODE MA8082-L-TX			
D908	8-719-422-86	DIODE MA8082-L-TX			
D909	8-719-422-86	DIODE MA8082-L-TX			
D910	8-719-422-86	DIODE MA8082-L-TX			
D911	8-719-422-86	DIODE MA8082-L-TX			
D912	8-719-404-50	DIODE MA111-TX			
		< TRANSISTOR >			
Q901	8-729-403-03	TRANSISTOR XN4212-TW			
Q902	8-729-042-31	TRANSISTOR UN9213J- (K8).SO			
		< RESISTOR >			
R901	1-216-864-91	SHORT	0		
R902	1-216-864-91	SHORT	0		
R903	1-216-829-91	RES, CHIP	4.7K	5%	1/16W
R904	1-216-864-91	SHORT	0		
R905	1-216-826-91	RES, CHIP	2.7K	5%	1/16W
R906	1-216-817-91	RES, CHIP	470	5%	1/16W
R907	1-216-817-91	RES, CHIP	470	5%	1/16W
R911	1-216-821-91	RES, CHIP	1K	5%	1/16W
		< VARIABLE RESISTOR >			
RV901	1-225-657-21	RES, VAR, CARBON 10K/10K (SEE THROUGH)			
		< SWITCH >			
S901	1-572-922-31	SWITCH, SLIDE (SCREEN)			
S902	1-572-498-41	SWITCH, SLIDE (ON/OFF)			
S903	1-771-029-21	SWITCH, TACTILE (MENU)			
S904	1-762-650-21	SWITCH, SLIDE (VIDEO/PC)			
S905	1-771-025-21	SWITCH, ROTARY (ENCODER)			(PUSH DISPLAY)
**********					
	A-8054-846-A	YC-148 BOARD, COMPLETE			
		**********			
	3-050-084-01	CASE (UPPER), YC SHIELD			
	3-050-085-01	CASE (LOWER), YC SHIELD			
		< CAPACITOR >			
C1001	1-135-181-91	TANTAL. CHIP	4.7uF	20%	6.3V
C1002	1-107-819-81	CERAMIC CHIP	0.022uF	10%	16V
C1003	1-164-937-81	CERAMIC CHIP	0.001uF	10%	16V
C1004	1-164-941-81	CERAMIC CHIP	0.0047uF	10%	16V
C1005	1-107-819-81	CERAMIC CHIP	0.022uF	10%	16V
C1006	1-113-682-91	TANTAL. CHIP	33uF	20%	10V
C1007	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C1008	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1009	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1011	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1012	1-113-682-91	TANTAL. CHIP	33uF	20%	10V
C1013	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C1014	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C1016	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C1017	1-164-947-81	CERAMIC CHIP	0.01uF		16V
C1018	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1019	1-164-872-81	CERAMIC CHIP	82PF	5%	16V
C1020	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C1021	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1022	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1023	1-162-968-91	CERAMIC CHIP	0.0047uF	10%	50V
C1024	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C1026	1-164-937-81	CERAMIC CHIP	0.001uF	10%	16V
C1027	1-164-864-81	CERAMIC CHIP	39PF	5%	16V
C1028	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1029	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1030	1-162-919-91	CERAMIC CHIP	22PF	5%	50V
C1031	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C1033	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1034	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1035	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1036	1-164-346-91	CERAMIC CHIP	1uF		16V
C1037	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1038	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1039	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1040	1-164-346-91	CERAMIC CHIP	1uF		16V
C1041	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1042	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1043	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1044	1-162-968-91	CERAMIC CHIP	0.0047uF	10%	50V
C1045	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1046	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1047	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1048	1-164-882-81	CERAMIC CHIP	220PF	5%	16V
C1049	1-135-099-91	TANTAL. CHIP	2.2uF	20%	6.3V
C1050	1-164-388-91	CERAMIC CHIP	270PF	5%	50V
C1051	1-164-392-91	CERAMIC CHIP	390PF	5%	50V
C1052	1-162-968-91	CERAMIC CHIP	0.0047uF	10%	50V
C1053	1-135-091-91	TANTAL. CHIP	1uF	20%	16V
C1054	1-135-099-91	TANTAL. CHIP	2.2uF	20%	6.3V
C1055	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1056	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1057	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1058	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1059	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1060	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1061	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1062	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1063	1-109-982-91	CERAMIC CHIP	1uF	10%	10V
C1064	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1065	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1066	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1067	1-135-181-91	TANTAL. CHIP	4.7uF	20%	6.3V
C1068	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C1069	1-164-346-91	CERAMIC CHIP	1uF		16V
C1070	1-164-004-91	CERAMIC CHIP	0.1uF	10%	25V
C1071	1-164-346-91	CERAMIC CHIP	1uF		16V
C1072	1-164-854-81	CERAMIC CHIP	15PF	5%	16V
C1074	1-164-346-91	CERAMIC CHIP	1uF		16V
C1075	1-115-467-91	CERAMIC CHIP	0.22uF	10%	10V
C1076	1-164-346-91	CERAMIC CHIP	1uF		16V
C1077	1-164-346-91	CERAMIC CHIP	1uF		16V
C1078	1-164-346-91	CERAMIC CHIP	1uF		16V
C1079	1-164-346-91	CERAMIC CHIP	1uF		16V
C1080	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V

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Ref. No.	Part No.	Description			Remark
C1081	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1082	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1083	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1084	1-164-315-91	CERAMIC CHIP	470PF	5%	50V
C1085	1-164-218-91	CERAMIC CHIP	180PF	5%	50V
C1086	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1087	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1088	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1089	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1090	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1091	1-162-928-91	CERAMIC CHIP	120PF	5%	50V
C1092	1-162-928-91	CERAMIC CHIP	120PF	5%	50V
C1093	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1094	1-164-388-91	CERAMIC CHIP	270PF	5%	50V
C1095	1-164-388-91	CERAMIC CHIP	270PF	5%	50V
C1096	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1097	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1098	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1099	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1100	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1101	1-113-682-91	TANTAL. CHIP	33uF	20%	10V
C1102	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1103	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1104	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1105	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1106	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1107	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1108	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1109	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C1110	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1111	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1112	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1113	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1114	1-164-346-91	CERAMIC CHIP	1uF		16V
C1115	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1116	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1117	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1118	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1119	1-109-982-91	CERAMIC CHIP	1uF	10%	10V
C1120	1-164-505-91	CERAMIC CHIP	2.2uF		16V
C1121	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1122	1-135-259-91	TANTAL. CHIP	10uF	20%	6.3V
C1123	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C1124	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1133	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1134	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1135	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1136	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1137	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1138	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1139	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C1140	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1141	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1163	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1164	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1165	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1166	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1167	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1168	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1169	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C1170	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1171	1-164-156-91	CERAMIC CHIP	0.1uF		25V
C1201	1-163-031-91	CERAMIC CHIP	0.01uF		50V
C1202	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1203	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1204	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1205	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1206	1-107-725-91	CERAMIC CHIP	0.1uF	10%	16V
C1207	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1209	1-164-858-91	CERAMIC CHIP	22PF	5%	16V
C1211	1-164-858-91	CERAMIC CHIP	22PF	5%	16V
C1213	1-164-858-91	CERAMIC CHIP	22PF	5%	16V
C1251	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1252	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1253	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1263	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1273	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1303	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C1304	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C1305	1-162-974-91	CERAMIC CHIP	0.01uF		50V
C1306	1-104-851-91	TANTAL. CHIP	10uF	20%	10V
C1313	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C1314	1-164-326-91	CERAMIC CHIP	0.47uF		16V
C1315	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C1316	1-107-682-91	CERAMIC CHIP	1uF	10%	16V

< CONNECTOR >

CN1001	1-750-345-21	CONNECTOR, FFC/EPC (ZIF) 30P
CN1002	1-770-623-21	PIN, CONNECTOR 6P
CN1003	1-573-990-21	CONNECTOR, BOARD TO BOARD 10P
CN1004	1-779-884-21	CONNECTOR 4P

< DIODE >

D1001	8-719-404-50	DIODE MA111-TX
D1002	8-719-404-50	DIODE MA111-TX
D1003	8-713-100-12	DIODE 1T362-01-T8A
D1301	8-719-062-16	DIODE 01ZA8.2 (TPL3)
D1302	8-719-062-16	DIODE 01ZA8.2 (TPL3)
D1303	8-719-422-86	DIODE MA8082-L-TX
D1304	8-719-422-86	DIODE MA8082-L-TX
D1305	8-719-422-86	DIODE MA8082-L-TX
D1308	8-719-422-86	DIODE MA8082-L-TX
D1309	8-719-422-86	DIODE MA8082-L-TX
D1311	8-719-062-16	DIODE 01ZA8.2 (TPL3)
D1312	8-719-062-16	DIODE 01ZA8.2 (TPL3)
D1313	8-719-062-16	DIODE 01ZA8.2 (TPL3)

< FERRITE BEAD/FILTER >

FB1001	1-414-235-22	INDUCTOR CHIP 0uH
FB1002	1-414-235-22	INDUCTOR CHIP 0uH
FB1003	1-414-235-22	INDUCTOR CHIP 0uH
FB1004	1-414-235-22	INDUCTOR CHIP 0uH
FB1005	1-414-235-22	INDUCTOR CHIP 0uH
FB1101	1-414-235-22	INDUCTOR CHIP 0uH
FB1102	1-414-235-22	INDUCTOR CHIP 0uH
FB1103	1-414-235-22	INDUCTOR CHIP 0uH

Ref. No.	Part No.	Description	Remark
FB1111	1-414-235-22	INDUCTOR CHIP 0uH	
FB1131	1-414-235-22	INDUCTOR CHIP 0uH	
FB1132	1-414-235-22	INDUCTOR CHIP 0uH	
FB1133	1-414-235-22	INDUCTOR CHIP 0uH	
FB1161	1-414-235-22	INDUCTOR CHIP 0uH	
FB1162	1-414-235-22	INDUCTOR CHIP 0uH	
FB1163	1-414-235-22	INDUCTOR CHIP 0uH	
FB1201	1-414-235-22	INDUCTOR CHIP 0uH	
FB1202	1-414-235-22	INDUCTOR CHIP 0uH	
FB1301	1-234-269-21	EMI FILTER	
FB1302	1-234-269-21	EMI FILTER	
FB1303	1-234-269-21	EMI FILTER	
FB1304	1-234-269-21	EMI FILTER	
FB1305	1-414-385-21	INDUCTOR CHIP 0uH	
FB1306	1-414-385-21	INDUCTOR CHIP 0uH	
FB1311	1-414-385-21	INDUCTOR CHIP 0uH	
FB1312	1-414-385-21	INDUCTOR CHIP 0uH	
FB1313	1-414-385-21	INDUCTOR CHIP 0uH	
FB1314	1-414-385-21	INDUCTOR CHIP 0uH	
FB1315	1-414-385-21	INDUCTOR CHIP 0uH	
FB1316	1-414-385-21	INDUCTOR CHIP 0uH	
FB1317	1-414-385-21	INDUCTOR CHIP 0uH	
FB1318	1-414-385-21	INDUCTOR CHIP 0uH	
FB1319	1-414-385-21	INDUCTOR CHIP 0uH	
FB1320	1-414-385-21	INDUCTOR CHIP 0uH	
FB1321	1-414-385-21	INDUCTOR CHIP 0uH	
FB1322	1-414-385-21	INDUCTOR CHIP 0uH	
FB1323	1-414-385-21	INDUCTOR CHIP 0uH	
FB1324	1-414-385-21	INDUCTOR CHIP 0uH	
FB1325	1-414-385-21	INDUCTOR CHIP 0uH	
FB1326	1-414-385-21	INDUCTOR CHIP 0uH	
FB1327	1-414-385-21	INDUCTOR CHIP 0uH	
FB1328	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1329	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1330	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1331	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1332	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1333	1-500-419-22	INDUCTOR, FERRITE BEAD	
FB1334	1-500-419-22	INDUCTOR, FERRITE BEAD	
		< FILTER/DELAY >	
FL1001	1-415-764-21	DELAY LINE, LC	
FL1002	1-415-764-21	DELAY LINE, LC	
FL1003	1-415-764-21	DELAY LINE, LC	
FL1011	1-234-107-21	FILTER, EMI	
		< IC >	
IC1001	8-759-372-18	IC uPC1830GT-E2	
IC1002	8-759-457-75	IC MC141628FUEB	
IC1003	8-759-537-99	IC MC44144DR2	
IC1004	8-759-565-20	IC TDA4665T/V5-118	
IC1005	8-759-523-04	IC TC74HC4538AFT (EL)	
IC1006	8-759-058-58	IC TC7S04FU (TE85R)	
IC1007	8-759-234-42	IC TC7S08F (TE85R)	
IC1008	8-759-234-42	IC TC7S08F (TE85R)	
IC1009	8-759-498-26	IC NJM2534V (TE2)	
IC1010	8-759-498-26	IC NJM2534V (TE2)	
IC1011	8-759-082-61	IC TC4W53FU	
IC1012	8-759-083-95	IC TC7W74FU (TE12R)	
IC1013	8-759-058-54	IC TC7S00FU (TE85R)	
IC1014	8-759-524-18	IC TC74VHC163FT (EL)	
IC1015	8-759-058-62	IC TC7S08FU (TE85R)	
IC1016	8-759-083-95	IC TC7W74FU (TE12R)	
IC1017	8-759-058-54	IC TC7S00FU (TE85R)	
IC1019	8-759-058-56	IC TC7S02FU (TE85R)	
IC1020	8-759-058-62	IC TC7S08FU (TE85R)	
IC1101	8-752-349-19	IC CXD1176Q-T4	
IC1102	8-752-349-19	IC CXD1176Q-T4	
IC1103	8-752-349-19	IC CXD1176Q-T4	
IC1104	8-759-277-61	IC uPD485505G-35-E2	
IC1105	8-759-277-61	IC uPD485505G-35-E2	
IC1106	8-759-277-61	IC uPD485505G-35-E2	
IC1108	8-759-079-49	IC TC74VHC04FS (EL)	
IC1201	8-752-351-85	IC CXD1178Q-T6	
IC1301	8-759-450-93	IC NJM2521M-TE1	
IC1302	8-759-450-93	IC NJM2521M-TE1	
		< JACK >	
J1001	1-565-287-41	JACK (AUDIO IN)	
J1002	1-778-040-11	JACK, SMALL TYPE (AUDIO/VIDEO)	
		< COIL >	
L1001	1-414-410-21	INDUCTOR 10uH	
L1002	1-414-410-21	INDUCTOR 10uH	
L1003	1-412-946-21	INDUCTOR 3.9uH	
L1101	1-414-410-21	INDUCTOR 10uH	
L1102	1-414-410-21	INDUCTOR 10uH	
L1103	1-412-952-21	INDUCTOR 12uH	
L1104	1-412-952-21	INDUCTOR 12uH	
L1105	1-412-952-21	INDUCTOR 12uH	
		< TRANSISTOR >	
Q1001	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1002	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1003	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1004	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1005	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1006	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1007	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1008	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1009	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1010	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1011	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1012	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1013	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1014	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1015	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1016	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1017	8-729-042-26	TRANSISTOR 2SB1462J-QR (K8).SO	
Q1018	8-729-042-28	TRANSISTOR 2SD2216J-QR (K8).SO	
Q1019	8-729-043-40	TRANSISTOR 2SC4627J-C (K8).S0	
Q1020	8-729-043-40	TRANSISTOR 2SC4627J-C (K8).S0	
Q1021	8-729-043-40	TRANSISTOR 2SC4627J-C (K8).S0	
Q1022	8-729-427-73	TRANSISTOR XP4501-TXE	
Q1023	8-729-042-31	TRANSISTOR UN9213J- (K8).SO	

Ref. No.	Part No.	Description			Remark
Q1024	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1025	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1026	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1027	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1028	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1029	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1030	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1031	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1032	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1033	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1034	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1035	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1036	8-729-042-31	TRANSISTOR	UN9213J- (K8).SO		
Q1251	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1252	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1261	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1262	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1271	8-729-042-28	TRANSISTOR	2SD2216J-QR (K8).SO		
Q1272	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q1331	8-729-928-82	TRANSISTOR	DTC144EE-TL		
Q1332	8-729-043-94	TRANSISTOR	CPH3106-PM-TL		
		< RESISTOR >			
R1001	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1002	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1003	1-218-960-81	RES, CHIP	3.9K	5%	1/16W
R1004	1-218-958-81	RES, CHIP	2.7K	5%	1/16W
R1005	1-218-989-81	RES, CHIP	1M	5%	1/16W
R1006	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1007	1-218-969-81	RES, CHIP	22K	5%	1/16W
R1008	1-218-975-81	RES, CHIP	68K	5%	1/16W
R1009	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1010	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R1011	1-218-961-81	RES, CHIP	4.7K	5%	1/16W
R1012	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1013	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1014	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1015	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1016	1-218-948-81	RES, CHIP	390	5%	1/16W
R1017	1-218-951-81	RES, CHIP	680	5%	1/16W
R1019	1-218-954-81	RES, CHIP	1.2K	5%	1/16W
R1020	1-218-935-81	RES, CHIP	33	5%	1/16W
R1021	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1022	1-218-941-81	RES, CHIP	100	5%	1/16W
R1023	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1024	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1025	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1026	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1027	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1028	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1029	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1030	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1032	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R1033	1-218-976-81	RES, CHIP	82K	5%	1/16W
R1034	1-218-966-81	RES, CHIP	12K	5%	1/16W
R1035	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1036	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1037	1-218-953-81	RES, CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1038	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1039	1-218-945-81	RES, CHIP	220	5%	1/16W
R1040	1-218-945-81	RES, CHIP	220	5%	1/16W
R1041	1-218-945-81	RES, CHIP	220	5%	1/16W
R1042	1-218-948-81	RES, CHIP	390	5%	1/16W
R1043	1-218-943-81	RES, CHIP	150	5%	1/16W
R1044	1-218-981-81	RES, CHIP	220K	5%	1/16W
R1045	1-218-945-81	RES, CHIP	220	5%	1/16W
R1046	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R1047	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1048	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1049	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1050	1-218-977-81	RES, CHIP	100K	5%	1/16W
R1051	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1052	1-218-951-81	RES, CHIP	680	5%	1/16W
R1054	1-218-946-81	RES, CHIP	270	5%	1/16W
R1055	1-218-951-81	RES, CHIP	680	5%	1/16W
R1056	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1057	1-218-941-81	RES, CHIP	100	5%	1/16W
R1058	1-218-958-81	RES, CHIP	2.7K	5%	1/16W
R1059	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R1060	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1061	1-218-937-81	RES, CHIP	47	5%	1/16W
R1062	1-218-941-81	RES, CHIP	100	5%	1/16W
R1063	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1064	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1065	1-218-941-81	RES, CHIP	100	5%	1/16W
R1066	1-218-941-81	RES, CHIP	100	5%	1/16W
R1068	1-218-981-81	RES, CHIP	220K	5%	1/16W
R1070	1-218-941-81	RES, CHIP	100	5%	1/16W
R1072	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1073	1-218-956-81	RES, CHIP	1.8K	5%	1/16W
R1074	1-218-990-81	SHORT	0		
R1075	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R1076	1-218-929-81	RES, CHIP	10	5%	1/16W
R1078	1-218-949-81	RES, CHIP	470	5%	1/16W
R1079	1-218-929-81	RES, CHIP	10	5%	1/16W
R1081	1-218-955-81	RES, CHIP	1.5K	5%	1/16W
R1082	1-220-202-81	RES, CHIP	43K	5%	1/16W
R1083	1-218-962-81	RES, CHIP	5.6K	5%	1/16W
R1084	1-218-964-81	RES, CHIP	8.2K	5%	1/16W
R1085	1-218-968-81	RES, CHIP	18K	5%	1/16W
R1086	1-218-970-81	RES, CHIP	27K	5%	1/16W
R1087	1-218-970-81	RES, CHIP	27K	5%	1/16W
R1088	1-218-981-81	RES, CHIP	220K	5%	1/16W
R1089	1-218-972-81	RES, CHIP	39K	5%	1/16W
R1090	1-218-972-81	RES, CHIP	39K	5%	1/16W
R1091	1-218-964-81	RES, CHIP	8.2K	5%	1/16W
R1092	1-218-929-81	RES, CHIP	10	5%	1/16W
R1094	1-218-949-81	RES, CHIP	470	5%	1/16W
R1095	1-218-941-81	RES, CHIP	100	5%	1/16W
R1096	1-218-941-81	RES, CHIP	100	5%	1/16W
R1097	1-218-941-81	RES, CHIP	100	5%	1/16W
R1098	1-218-987-81	RES, CHIP	680K	5%	1/16W
R1099	1-218-967-81	RES, CHIP	15K	5%	1/16W
R1100	1-218-952-81	RES, CHIP	820	5%	1/16W
R1101	1-218-285-91	RES, CHIP	75	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1102	1-218-949-81	RES, CHIP	470	5%	1/16W
R1103	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1104	1-218-929-81	RES, CHIP	10	5%	1/16W
R1105	1-218-929-81	RES, CHIP	10	5%	1/16W
R1106	1-218-929-81	RES, CHIP	10	5%	1/16W
R1107	1-218-929-81	RES, CHIP	10	5%	1/16W
R1108	1-218-929-81	RES, CHIP	10	5%	1/16W
R1109	1-218-929-81	RES, CHIP	10	5%	1/16W
R1110	1-218-929-81	RES, CHIP	10	5%	1/16W
R1111	1-218-929-81	RES, CHIP	10	5%	1/16W
R1112	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1113	1-218-929-81	RES, CHIP	10	5%	1/16W
R1114	1-218-929-81	RES, CHIP	10	5%	1/16W
R1115	1-218-929-81	RES, CHIP	10	5%	1/16W
R1116	1-218-929-81	RES, CHIP	10	5%	1/16W
R1117	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1118	1-218-929-81	RES, CHIP	10	5%	1/16W
R1119	1-218-929-81	RES, CHIP	10	5%	1/16W
R1120	1-218-929-81	RES, CHIP	10	5%	1/16W
R1121	1-218-929-81	RES, CHIP	10	5%	1/16W
R1122	1-218-929-81	RES, CHIP	10	5%	1/16W
R1123	1-218-929-81	RES, CHIP	10	5%	1/16W
R1124	1-218-929-81	RES, CHIP	10	5%	1/16W
R1125	1-218-929-81	RES, CHIP	10	5%	1/16W
R1126	1-218-952-81	RES, CHIP	820	5%	1/16W
R1130	1-218-988-81	RES, CHIP	820K	5%	1/16W
R1131	1-218-285-91	RES, CHIP	75	5%	1/16W
R1132	1-218-949-81	RES, CHIP	470	5%	1/16W
R1133	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1134	1-218-929-81	RES, CHIP	10	5%	1/16W
R1135	1-218-929-81	RES, CHIP	10	5%	1/16W
R1136	1-218-929-81	RES, CHIP	10	5%	1/16W
R1137	1-218-929-81	RES, CHIP	10	5%	1/16W
R1138	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1139	1-218-929-81	RES, CHIP	10	5%	1/16W
R1140	1-218-929-81	RES, CHIP	10	5%	1/16W
R1141	1-218-929-81	RES, CHIP	10	5%	1/16W
R1142	1-218-929-81	RES, CHIP	10	5%	1/16W
R1143	1-218-929-81	RES, CHIP	10	5%	1/16W
R1144	1-218-929-81	RES, CHIP	10	5%	1/16W
R1145	1-218-929-81	RES, CHIP	10	5%	1/16W
R1146	1-218-929-81	RES, CHIP	10	5%	1/16W
R1147	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1148	1-218-929-81	RES, CHIP	10	5%	1/16W
R1149	1-218-929-81	RES, CHIP	10	5%	1/16W
R1150	1-218-929-81	RES, CHIP	10	5%	1/16W
R1151	1-218-929-81	RES, CHIP	10	5%	1/16W
R1152	1-218-964-81	RES, CHIP	8.2K	5%	1/16W
R1153	1-218-967-81	RES, CHIP	15K	5%	1/16W
R1154	1-218-969-81	RES, CHIP	22K	5%	1/16W
R1156	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1158	1-218-957-81	RES, CHIP	2.2K	5%	1/16W
R1159	1-218-956-81	RES, CHIP	1.8K	5%	1/16W
R1160	1-218-865-91	RES, CHIP	5.6K	0.50%	1/16W
R1161	1-218-285-91	RES, CHIP	75	5%	1/16W
R1162	1-218-949-81	RES, CHIP	470	5%	1/16W
R1163	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1164	1-218-929-81	RES, CHIP	10	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1165	1-218-929-81	RES, CHIP	10	5%	1/16W
R1166	1-218-929-81	RES, CHIP	10	5%	1/16W
R1167	1-218-929-81	RES, CHIP	10	5%	1/16W
R1168	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1169	1-218-929-81	RES, CHIP	10	5%	1/16W
R1170	1-218-929-81	RES, CHIP	10	5%	1/16W
R1171	1-218-929-81	RES, CHIP	10	5%	1/16W
R1172	1-218-929-81	RES, CHIP	10	5%	1/16W
R1173	1-218-929-81	RES, CHIP	10	5%	1/16W
R1174	1-218-929-81	RES, CHIP	10	5%	1/16W
R1175	1-218-929-81	RES, CHIP	10	5%	1/16W
R1176	1-218-929-81	RES, CHIP	10	5%	1/16W
R1177	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1178	1-218-929-81	RES, CHIP	10	5%	1/16W
R1179	1-218-929-81	RES, CHIP	10	5%	1/16W
R1180	1-218-929-81	RES, CHIP	10	5%	1/16W
R1181	1-218-929-81	RES, CHIP	10	5%	1/16W
R1182	1-218-857-91	RES, CHIP	2.7K	0.50%	1/16W
R1183	1-218-865-91	RES, CHIP	5.6K	0.50%	1/16W
R1184	1-218-871-91	RES, CHIP	10K	0.50%	1/16W
R1185	1-218-941-81	RES, CHIP	100	5%	1/16W
R1186	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1187	1-218-941-81	RES, CHIP	100	5%	1/16W
R1188	1-218-929-81	RES, CHIP	10	5%	1/16W
R1189	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1190	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1191	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1192	1-218-929-81	RES, CHIP	10	5%	1/16W
R1193	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1194	1-218-929-81	RES, CHIP	10	5%	1/16W
R1195	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1196	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1197	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1198	1-218-929-81	RES, CHIP	10	5%	1/16W
R1199	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1200	1-218-929-81	RES, CHIP	10	5%	1/16W
R1201	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1202	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1203	1-218-963-81	RES, CHIP	6.8K	5%	1/16W
R1204	1-218-959-81	RES, CHIP	3.3K	5%	1/16W
R1205	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1206	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1207	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1208	1-218-929-81	RES, CHIP	10	5%	1/16W
R1209	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1210	1-218-939-81	RES, CHIP	68	5%	1/16W
R1211	1-218-939-81	RES, CHIP	68	5%	1/16W
R1212	1-218-939-81	RES, CHIP	68	5%	1/16W
R1213	1-218-965-81	RES, CHIP	10K	5%	1/16W
R1214	1-218-990-81	SHORT	0		
R1216	1-218-951-81	RES, CHIP	680	5%	1/16W
R1217	1-218-951-81	RES, CHIP	680	5%	1/16W
R1219	1-218-990-81	SHORT	0		
R1222	1-218-960-81	RES, CHIP	3.9K	5%	1/16W
R1223	1-218-960-81	RES, CHIP	3.9K	5%	1/16W
R1224	1-218-941-81	RES, CHIP	100	5%	1/16W
R1225	1-218-929-81	RES, CHIP	10	5%	1/16W
R1226	1-218-941-81	RES, CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1227	1-218-970-81	RES, CHIP	27K	5%	1/16W
R1228	1-218-967-81	RES, CHIP	15K	5%	1/16W
R1229	1-218-929-81	RES, CHIP	10	5%	1/16W
R1230	1-218-970-81	RES, CHIP	27K	5%	1/16W
R1231	1-218-929-81	RES, CHIP	10	5%	1/16W
R1232	1-218-929-81	RES, CHIP	10	5%	1/16W
R1233	1-218-968-81	RES, CHIP	18K	5%	1/16W
R1234	1-218-959-81	RES, CHIP	3.3K	5%	1/16W
R1238	1-218-929-81	RES, CHIP	10	5%	1/16W
R1239	1-218-979-81	RES, CHIP	150K	5%	1/16W
R1240	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1241	1-218-968-81	RES, CHIP	18K	5%	1/16W
R1242	1-218-941-81	RES, CHIP	100	5%	1/16W
R1243	1-218-990-81	SHORT	0		
R1244	1-218-990-81	SHORT	0		
R1246	1-218-990-81	SHORT	0		
R1251	1-218-945-81	RES, CHIP	220	5%	1/16W
R1254	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1255	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1256	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1257	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1258	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1259	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1261	1-218-945-81	RES, CHIP	220	5%	1/16W
R1264	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1265	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1266	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1267	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1268	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1269	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1271	1-218-945-81	RES, CHIP	220	5%	1/16W
R1274	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1275	1-218-971-81	RES, CHIP	33K	5%	1/16W
R1276	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1277	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1278	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1279	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1301	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1302	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1303	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1304	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1305	1-216-864-91	SHORT	0		
R1306	1-216-864-91	SHORT	0		
R1307	1-218-990-81	SHORT	0		
R1308	1-218-990-81	SHORT	0		
R1310	1-218-929-81	RES, CHIP	10	5%	1/16W
R1311	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1312	1-218-973-81	RES, CHIP	47K	5%	1/16W
R1313	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1314	1-218-953-81	RES, CHIP	1K	5%	1/16W
R1315	1-218-285-91	RES, CHIP	75	5%	1/16W
R1316	1-216-295-91	SHORT	0		
R1317	1-218-990-81	SHORT	0		
R1318	1-218-990-81	SHORT	0		
R1319	1-218-990-81	SHORT	0		
R1320	1-218-990-81	SHORT	0		
R1321	1-216-150-91	RES, CHIP	10	5%	1/8W
R1331	1-218-973-81	RES, CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R1332	1-216-033-91	RES, CHIP	220	5%	1/10W
		< VARIABLE RESISTOR >			
RV1301	1-241-748-21	RES, VAR, CARBON 10K/10K (VOL)			
		< SWITCH >			
S1301	1-771-430-11	SWITCH, ROTARY ENCODER (BRIGHT)			
		< VIBRATOR >			
X1001	1-579-780-42	VIBRATOR, CRYSTAL (17.734475MHz)			
X1002	1-578-690-11	VIBRATOR, CERAMIC (500kHz)			
X1003	1-579-661-21	OSCILLATOR, CRYSTAL (4.433619MHz)			
**********					
		MISCELLANEOUS			
		**********			
2	1-803-159-11	LIQUID CRYSTAL, FILM (PANEL)			
⚠16	1-475-821-21	LIGHT UNIT, BACK			
51	1-670-349-11	FP-661 FLEXIBLE BOARD			
160	1-537-461-61	TERMINAL BOARD, BATTERY			
203	1-783-673-11	CABLE, CONNECTION			
211	1-670-350-11	FP-662 FLEXIBLE BOARD			
215	1-783-675-11	CABLE, FLEXIBLE FLAT (FFC-233)			
216	1-783-676-11	CABLE, FLEXIBLE FLAT (FFC-234)			
HP401	8-953-118-91	HEADPHONE MDR-E838PT/1 SET (including HP402)			
M701	1-763-120-11	MOTOR, DC FAN			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
⚠	1-475-822-11	ADAPTOR, AC (AC-PLM3)			
⚠	1-575-131-31	CORD, POWER			
	1-777-690-11	CORD, CONNECTION			
	1-783-671-11	CABLE ASSY 15P			
	1-783-829-11	CABLE, AV MONITOR			
	3-050-093-01	CASE, SOFT			
	3-862-917-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)			
	3-862-917-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH)			
	3-862-917-31	MANUAL, INSTRUCTION (GERMAN, DUTCH)			
	3-862-917-41	MANUAL, INSTRUCTION (SWEDISH, FINNISH)			
	3-862-917-51	MANUAL, INSTRUCTION (NORWEGIAN, DANISH)			
	3-862-917-61	MANUAL, INSTRUCTION (PORTUGUESE, SPANISH)			
	3-862-917-71	MANUAL, INSTRUCTION (ITALIAN, GREEK)			
	3-865-654-01	MANUAL, INSTRUCTION (INFORMATION)			
	3-865-887-01	MANUAL, INSTRUCTION (ADJUSTMENT)			
	4-640-407-01	DISK, INFORMATION			
	4-640-408-01	DISK, PICTURE ADJUSTMENT			
	X-3948-728-1	HOOD (R) ASSY, INTERCEPTION			
	X-3948-729-1	HOOD (L) ASSY, INTERCEPTION			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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